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ATARI World

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● Apex Intro ● Evolution Dino Dudes ● DA's Layout ● Rufrade
● Da Capo ● True Disk ● Music Box ● ST-Guide ● Bitmap View



System Solutions

Company of the Year 1994

A page full of new products and more to come in 1996

MagiC 4

"If you want a multitasking system that works simply and reliably, then MagiC is for you."
ST Review, June 1994.

MagiC 4 is a complete TOS replacement (No more TOS upgrades required!). Fully pre-emptive with very fast disk filing, faster MIDI and faster printing routines it is actually accelerating your programs. MagiC 4 comes with truly exciting new features and a completely revamped MagiC Desk.

Some of the new features are ...

- ★ Now runs on the Falcon 030
- ★ Drag & Drop (pipes)
- ★ IDE hard disk & DSP support
- ★ Additional file systems and device drivers can be loaded
- ★ Accelerated and completely re-entrant filing system with background DMA (requires HD-Driver 4.5) i.e. you can now format or copy a floppy whilst using other programs.
- ★ Writeback Daemon
- ★ Built-in routines for 3D-Look and Colour Icons
- ★ New file selector
- ★ Symbolic Links (Aliases for files)

New MagiC Desk features:

- ★ New powerful 3D look Desktop with low memory requirement,
- ★ Copy and format in the background without locking of running programs or the desktop.
- ★ Kobold support
- ★ Parallel searching with comprehensive filters
- ★ 100 colour icons
- ★ Auto locator in the Desktop and file selector
- ★ Powerful font selector for text display
- ★ Background tiling and much more....

MagiC 4 for ST/TT/Falcon £69.95
MagiC 4 and Kobold £99.95

Please call for upgrade prices.

NVDI 4

Incorporating the screen accelerator, GDOS, Speedo and TrueType font systems of the previous release, the new version NVDI 4 comes packed with lots of useful new features. Here is a short list:

- ★ Faster print routines for the parallel port
- ★ Powerful new font tool for installed and un-installed fonts to pre-view, test print, group fonts into families and to print a font listing
- ★ Print test page sizes and max. printable area
- ★ UNICODE: Pro font support (65000 unique characters per font)
- ★ Support of Windows 95 fonts
- ★ Comes with 8 new fonts not previously supplied
- ★ More Colour printer drivers, Font quality test, NOVA-VDI support and more

NVDI 4 including 8 Speedo fonts £59.95
NVDI Postscript type 1 Font Module £24.95
100 TrueType font Pack 1 £39.95
100 TrueType font Pack 2 £39.95
500 TrueType font CD-ROM £49.95

Please call for NVDI special versions, upgrade options and prices.

NVDI 2.5 is still available for only £29.95

EASE 4

How to improve your ST desktop? Take Ease 4 features (right click to double click, auto window sizing to fit contents, text and icon windows, superb colour icon editor, auto sizing RAM disk, CORRECT file checking and repair program); add new features such as the Memo Icon - to leave those important reminders on your desktop; a new File Tree Pop-Up to get through deeply nested directories fast and without opening countless windows, and more features (too many to list). Add a revised manual and you get Ease 4. Definitely a vast improvement over the original desktop.

Ease 4 - desktop replacement software £49.95
or bundle it with MagiC 4 for only £99.95
or bundle it with NVDI 4 for only £89.95

CD ROMs



Our CD ROM Systems are special

- ★ Multi-session Drive ★ Photo CD compatible
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- ★ Dual SCSI port ★ Headphone socket with Volume control ★ Stereo Phono connectors

New ExtenDOS Pro 2.2

The Toshiba 4X speed drive comes complete with ExtenDOS Pro 2.2. New features include:

- ★ Direct SCSI transfer of Audio Tracks - drag samples from music CD's without sampling
- ★ Advanced Audio CD Player with Record track to hard disk feature
- ★ Comprehensive user friendly install program

FREE Mega Archive CD with every drive

4X Speed CD ROM system inc. ExtenDOS Pro for the Falcon with SCSI II Cable, or TT £269.95
for the ST(FM/e) with the ICD Link II £319.95

ExtenDOS Pro 2.2 software only £39.95

SCSI Drives



Best Hard Drive 1994
ST Review Xmas '94
MiniS hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed and style. The ST(FM/e) version now comes with the ICD Link II as standard, or choose the Translator with HD Driver. Also included are terminators and all required cables.

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270Mb	Quantum	£219.00	£269.00
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850Mb	Quantum	£309.00	£359.00
1Gb	Connor	£349.00	£399.00
2Gb	Connor	£759.00	VAT Included!

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HD Driver 4.5 £29.95

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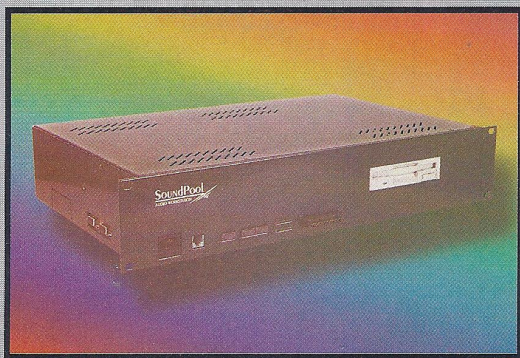
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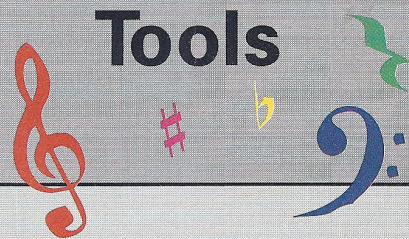
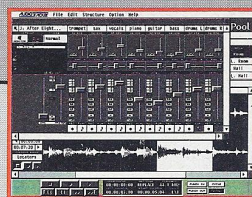
ATARI

WORKSHOP

SoundPool Pro Audio Tools



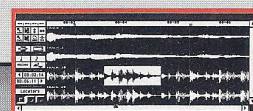
The SoundPool Audio Workstation has been designed for professional studio use. The 19" 2U Rack integrates the Falcon030 computer, Hard Disks, DAT I/F & extra MIDI outputs.



Audio Tracker

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A 4, 6 or 8 track digital recording system with built-in mixer and digital effects processor designed to meet demanding real-life studio situations. Audio Tracker generates and synchronises to MIDI Time Code and allows MIDI remote control. Well suited for professional video post production and an ideal companion for Cubase and Notator. Price £159.00



Falcon CDR Software

Press your own Audio CD's on the Falcon 030. The software manages audio files (AIFF, AVR and WAV) to create 'Red Book' compatible CD's. Features include PQ Editing, Selectable Pre-Emphasis, Copy Protection for each track and more. Available from only £159.00. Ask for complete CDR systems.

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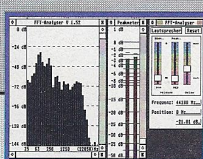
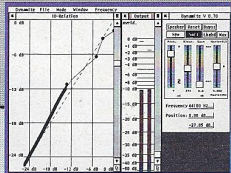
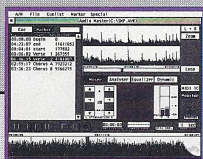
Precision measuring software for frequencies from 5Hz to 48KHz with linear, logarithmic, 3rd band and 'Sonogram' modes. Can be used with AudioMaster or as a stand alone program. Price £199.00

Dynamite - The Dynamics processor

The freely adjustable I/O curve allows the software to work as a compressor, expander, limiter or noisegate simultaneously at different level ranges. Can be integrated into AudioMaster. Price £199.00

ADAT Interface

The missing link to ADAT 8-track recorders, FX units, synthesizers, samplers and mixers. The Falcon can now record up to eight tracks simultaneously. £495.00



Audio Master

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FDI - DAT interface

The vital link to DAT recorders, CD players and the exciting Yamaha ProMix 1. Compatible with Cubase Audio and Notator Logic. £229.00



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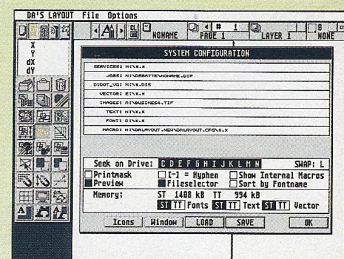
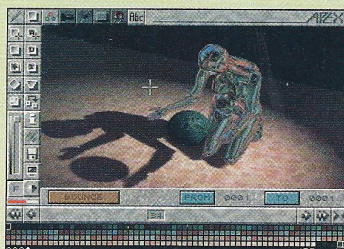


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http://exxos.www.idnet.com/IMPULSE/atari/last/

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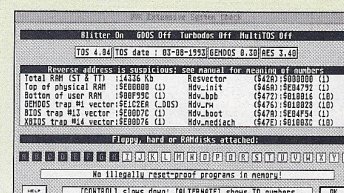


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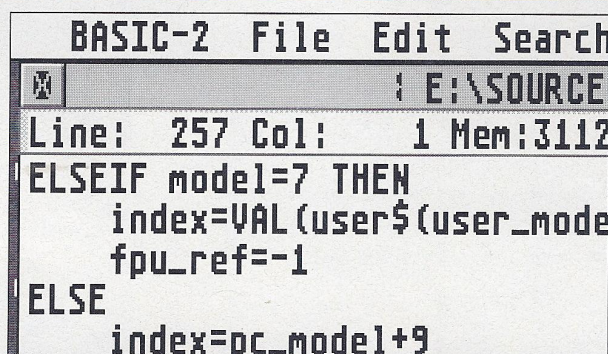
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Now you can read about it too. Steve Delaney proves the editor wrong.

Get the Atari World Reader Disk – see page 8 for details

Please enter password? Tari
Please enter password? ataro

Please enter password? duh!
Please enter password? huh?

Login: please enter your name? Ofir
Hello Ofir



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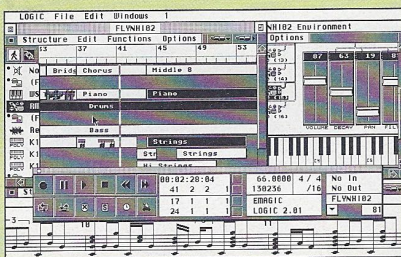
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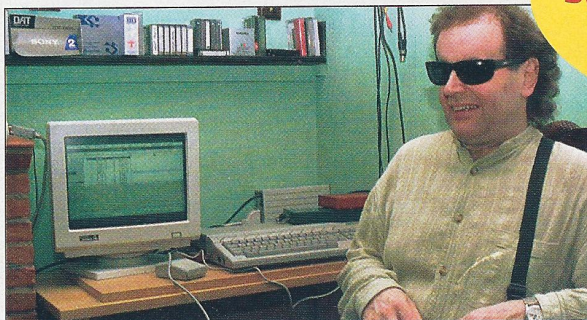
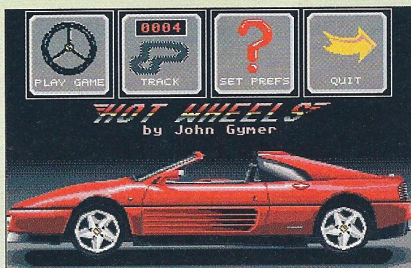
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Your questions answered by our technical team.



On the line



I've said it before and I've said it again. The Internet isn't ready. If it was sold over the counter in a box, the trading standards people would have a field day - it doesn't deliver a fraction of the things it says it will deliver, even if you've a fair idea of what you're doing.

All the online anoraks will be shouting heresy and baying for blood - so why am I sticking my neck out again? Haven't we just got a wonderful new graphical browser? Can't we now wander the world's wires as if we had Netscape or Mosaic? We can. Probably. It's a pig to set up and I don't expect that more than a tiny fraction of Atari users will have managed it so far.

Worse still, the Internet is full of dodgy connections and defunct sites. I tried to get on Atari's new Web site the other evening and couldn't - and I've got what many people say is the best access of all through Pipex. Halfway through a big download my connection went forever and when I tried another site, it kept telling me too many people were accessing it already.

Don't get me wrong - I like the Internet but then I understand a little about it and I have a lot of expensive equipment. If you do take the plunge, be prepared for a lot of time spent learning. Anyway, we're aiming to put together the definitive guide to getting online so watch this space...

See you at the December show!

Andrew Wright

Andrew Wright, editor

Don't miss the
December issue on
sale Nov 17th

SNIPPETS

Following the closure of BWare Software as announced last month, Chris Beale has taken over support for Supercard 3. The current version is 3.13 and registration costs £10 (or £8 if you enclose a blank disk and SAE). Contact C Beale, 19 Southfield Road, Hinckley, Leics, LE10 1UA or telephone 01455 613377 (evenings only).

Impact Software has cut the price of Team to £19.95 with immediate effect. The Falcon enhanced version of Team is nearing completion and due for release early next year. It runs in 256 colour mode and features totally revamped graphics. Price is expected to be £24.95. Contact Impact Software, 12 Bell Lane, Syresham, Northants, NN13 5HP.

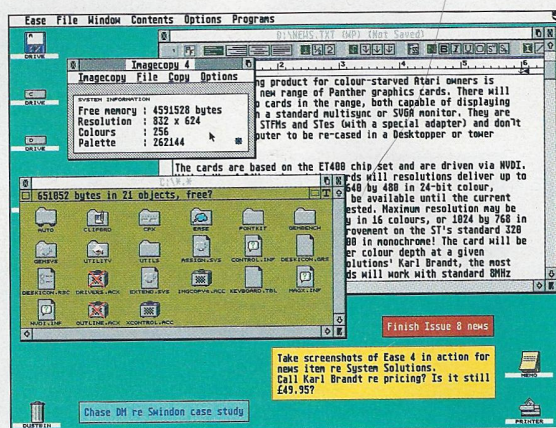
The Generalmusic User Group, which provides after sales service and support for the owners of Generalmusic instruments, has expanded its service and changed its name to Generalmusic User Support. Members get a bimonthly magazine called Worldwide, help and advice via email and access to a large software disk library. The company has also announced the TLC plan for members with access to a dedicated CompuServe forum, programming workshops and other benefits. Generalmusic User Support are on 01227 742790.

More news about Compo's new Falcon accelerator has emerged. The board will run at 32MHz but being a 68040 processor, it will run at twice that speed internally, delivering 64MHz for some computationally intensive tasks. There will be two SIMM sockets on the board taking industry-standard 72 pin SIMMs for up to 128Mb of RAM in addition to the normal Falcon RAM. This extra RAM will act much like TT fast RAM and should be usable by most modern applications. The cost will be £499 inclusive of VAT for the bare board and it will be demonstrated at the Atari World shows in December.

news

New Solutions

System Solutions announces a bagful of new products...



London-based Atari dealer System Solutions (0181 693 3355) seems to have shaken off its summer torpor with the announcement of a host of new products aimed at both professional and home users.

The most exciting product for colour-starved Atari owners is undoubtedly the new range of Panther graphics cards. There will initially be two cards in the range, both capable of displaying 24-bit colour on a standard multisync or SVGA monitor. They are compatible with STfMs and STes (with a special adapter) and don't require the computer to be re-cased in a Desktopper or tower system.

The cards are based on the ET400 chip set and are driven via NVDI. With 1 Mb of RAM on board the cards will resolutions deliver up to 800 by 600 in 16-bit colour and 640 by 480 in 24-bit colour, though full specifications won't be available until the current prototype model has been fully tested. Maximum resolution may be as high as 1280 by 1024, probably in 16 colours, or 1024 by 768 in 256 colours - a considerable improvement on the ST's standard 320 by 200 in 16 colours or 640 by 400 in monochrome! The card will be upgradable to 2Mb for even greater colour depth at a given resolution.

According to System Solutions' Karl Brandt, the most exciting feature is that the cards will work with standard 8MHz machines without any acceleration. The most exciting feature as far as mere mortals are concerned is likely to be the price - an attractive £259 for the STfM version and £299 for the STe version, fully fitted and including VAT. Form an orderly queue behind Atari World's editor, please, because he's hoping to get the prototype model for review as soon as he possibly can...

Ease

System Solutions has also announced a major upgrade for the Ease replacement desktop. The new version has been updated and

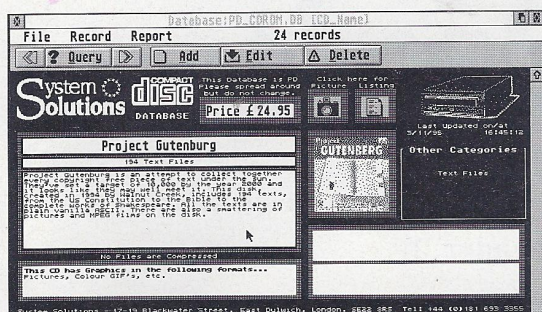
enhanced to offer more features, better ease of use and future proofing against a wide range of new Atari system programs.

Ease is the first software package to benefit from System Solutions' new (and long overdue) approach to the development and production of manuals. Using spiral-binding, high quality paper and state-of-the-art layout and printing techniques, System Solutions is promising that the manual will be the best ever produced for an Atari software package. It covers all of the features of Ease 4, old and new, and was written and laid-out exclusively on Atari computers and printed by Rank Xerox on a DokuTech system via the DA's Layout TC Postscript module.

New features include a memo icon to enable you to create memos on the desktop with complete control over colour and font style and a popup menu that appears whenever you hold down the mouse button on a disk icon or folder. This popup lets you navigate through the folder hierarchies using the mouse and when you release the button a file window will open. It is particularly useful for searching through CD ROMs and nested hard disks.

The configuration dialogue has been completely re-written, enabling you to set-up Ease quickly and easily. A dialogue box controls all your configuration details, dynamically changing its contents depending on which area of your setup you're working on. There is also a redesigned program menu. The desktop printer icon can now be set up to print via GDOS or SpeedoGDOS whenever a text file is dragged on to it. You can also select any colour from the palette for the window background and the desktop background graphic can be centred or tiled.

For users with 16 or more colours, the desktop palette handling has been dramatically improved as all colours on the desktop are intelligently merged into a



single palette, which is then saved until any changes are made. You can automatically refreshes window contents, useful in a multi-tasking environment, and shut down in a much more polite manner - all open programs are automatically closed and the write-ahead cache flushed to stop data loss.

Ease 4 is fully compatible with a number of new Atari products including the forthcoming MagiC 4, Kobold 3, MagiCMac 1.2.x, and

NVDI 3.5. Ease 4 will cost £49.95 though existing owners can return their original master disk and manual to System Solutions' London office. The upgrade includes the new manual and will cost £19.95 if a large SAE is enclosed.

Free CD database

System Solutions has also released a free database of all its CD ROMs. As System Solutions is the established number one publisher and vendor of Atari CD ROMs in the UK, it should certainly be comprehensive. The database uses a demo version of HiSoft's Twist database (which still isn't commercially available due to the lack of a manual). There is a graphic of the front cover and a full listing of each file.

The monochrome version, for

ST(FM/e) computers with mono monitors, comes unarchived on a double-density disk and can be run directly from the floppy. The colour version, for Falcon and TT computers with high-resolution colour monitors, is compressed onto a single high-density disk.

Owing to the sheer volume of information in the colour version, you will need a hard disk. To receive a free copy of the CD ROM database, send a floppy disk and SAE to System Solutions' London offices or download it from ssolutions conference on CIX.

The address to for upgrades and database requests is System Solutions, The Desktop Centre, 17-19 Blackwater Street, East Dulwich, London SE22 8RS.

New Geneva

Gribnif Software has announced a new version of Geneva, its multitasking operating system, plus a host of other enhancements, including a new program launcher and add-on utilities. Release 004 of Geneva boasts no less than 200 improvements, according to the author Dan Wilga - and the upgrade will cost only a fiver via UK distributor Compo Software (01487 773582). It is also available for download on the major online networks such as CompuServe.

The MiNT kernel can now be used with Geneva, to provide true pre-emptive multitasking, while also allowing alternate file systems, pipes, and so on. Text in dialogue buttons and window gadgets can have a shadowed appearance, to make it more readable. A new command has been added to the GEM.CNF file, called "runacc", that allows a desk accessory to be loaded but not opened. There is a new "Optimise window redraws" program flag and miscellaneous options for preserving the mouse and system colour palette when switching between applications.

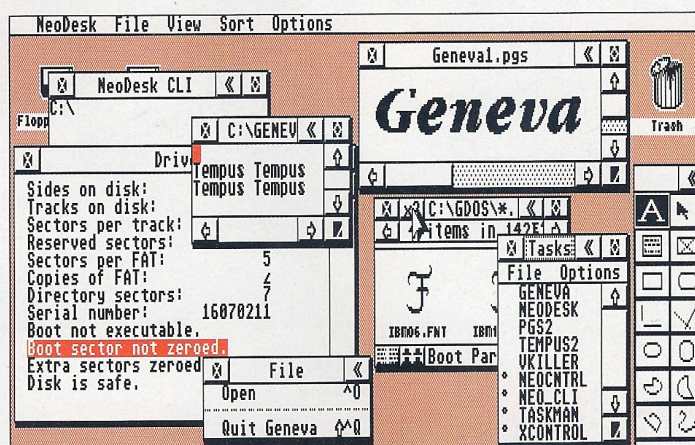
Compatibility with other applications has apparently been improved too and the Falcon problem the file selector has undergone several changes, including marking of read only files and preserved data and time in file copying. Geneva TOS will now run programs correctly on a Falcon and can use all SpeedoGDOS and TrueType fonts and not just the first 16.

More add-ons

Although Geneva and NeoDesk 4 together are extremely efficient, some Ataris might run short of memory when trying to run both of them and multitask several other programs at the same time. With this in mind, Gribnif has developed Geneva Run, a RAM-efficient multitasking program launcher for Geneva that avoids the need to load NeoDesk when memory is tight. It uses the same group file format as NeoDesk 4 to store user-defined long filenames and the actual path to any application, group, or data file.

The new program supports the AV protocol and has a fully windowed interface. The programs are launched by double-clicking with the mouse or using a keyboard shortcut. Geneva Run is shareware. The unregistered version is distributed freely with Geneva release 004 and can be registered with Gribnif for US\$15.

Gribnif has also announced the Geneva Utilities Disk containing Geneva View, a simple, efficient, text file viewer with a modern windowed interface and typical Geneva styling. You can display files in any installed GDOS font you like, and even show



them as a hexadecimal dump.

Geneva Desk allows you to choose any colour and pattern combination for your background or use the same background as NeoDesk. Geneva Macro Recorder is a full-blown macro utility, with timer, button, mouse and keyboard event recording. You can record macros of virtually any number of events, and play them back with a simple key press. You can also edit the individual steps that comprise a macro, using cut and paste.

Both extra disks should be available from Compo Software shortly or direct from Gribnif, PO Box 779, Northampton, MA 01061-0779, USA. Note that Gribnif's telephone number has changed too - the new number is (001) 413 532 2434 or you can fax on (001) 413 532 2540.

New ADAT interface

Soundpool has launched a revolutionary new ADAT digital interface that connects the Falcon to other ADAT devices such as ADAT 8-track recorders, FX units, synthesisers, samplers and mixers. Up to eight tracks can be recorded to hard disk simultaneously and edited with single sample precision. ADAT multitrack recordings can be digitally mixed and exported via the SPDIF interface.

With the appropriate multitrack hard disk recording software such as AudioTracker, Cubase Audio or Logic Audio, the Falcon can simultaneously transmit the audio data of its eight

individual audio channels through the ADAT interface directly to the connected ADAT recorder.

The ADAT interlace can be used together with the SPDIF and Analogue 8/4 interface at the same time. In digital record mode it will synchronise and lock to the input sample rate automatically. For playback the standard sample rate 48 kHz is provided to which the ADAT Recorder will lock automatically.

The interface is connected to the Falcon's DSP port and configured via software. It will cost £495 from UK distributor System Solutions (0181 693 3355).

Reader Disk

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A cover disk increases the price of a mag yet many readers never even look at the software! There has to be a better solution – the Reader Disk...

The optional Reader Disk directly supports the software covered in the magazine and creates a link between the reader and the software author. Atari World supports and encourages authors – in return you can do your bit by supporting them. The Atari World team is in constant contact with the best Atari programmers around – we keep your finger on the pulse and obtain the very latest versions, often exclusive to Atari World!

A single Reader Disk costs £2.50 inclusive of post and packing – around the same price as a typical PD disk. Some issues offer two or more Reader Disks with each additional disk costing £1. For example, an issue with two disks would cost £3.50 inclusive of post and packing. So the choice is yours but don't forget subscribers get all additional disks absolutely free! Check out the special subscriber deals on pages 40 and 41.

What's on the disk?

Ruftrade v2

Shareware • Charles Edwards

Ruftrade translates German documentation into readable English. Instead of using large dictionaries and brute force word for word substitution Ruftrade uses compact targeted dictionaries and artificial intelligence to outperform the pack.

TrueDisk v2.3

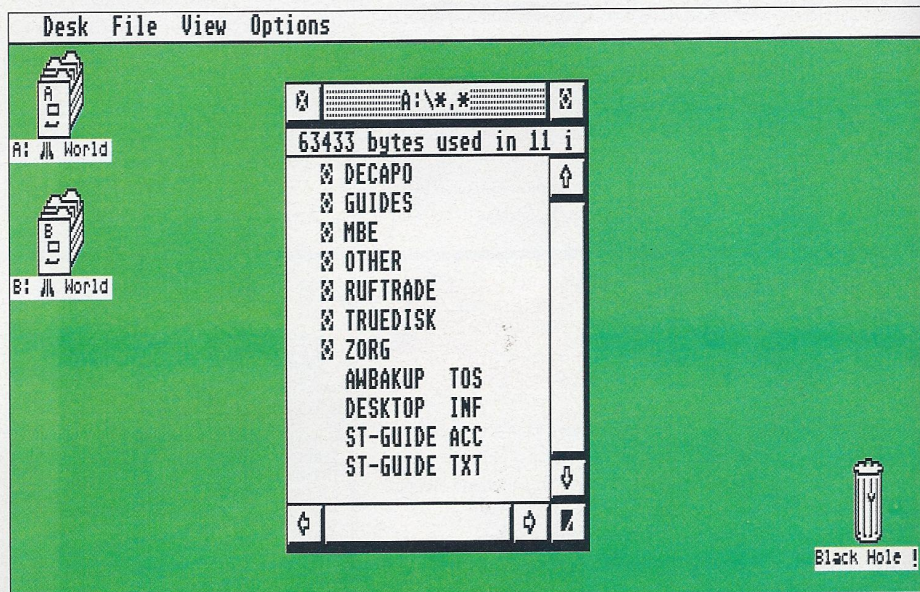
Freeware • Christoph Zwierschke

There are so many RAM disks to choose from reliability is a crucial feature. Not only is TrueDisk reliable it doesn't occupy a desktop accessory slot, survives a reset and can be removed 'on the fly' if you run short of memory.

Zorg v2.02

Shareware • Ludovic Rousseau

Zorg (Ze Organiser) is a file system manager. Zorg can examine the 'structural integrity' of your hard and floppy disks and repair most common faults. For the determined hacker files and sectors can be edited directly.



MBE v1.01

Shareware • Manfred Ssykor

MBE is a simple, fast and reliable encryption program ideal for everyday use. The encryption algorithm isn't as secure as PGP but it's good enough to deter all but the most determined snoopers.

De Capo v2.02a

Shareware • Dr Francisco Mendez

Da Capo is an address manager crammed full of desirable features. The attractive front end and support for all the latest protocols and standards should steal a few hearts. De Capo runs as either a program or desktop accessory (rename DECAPO.APP to DECAPO.ACC).

ST-Guide v1.4

Fairware • Holger Weets

ST-Guide is the hypertext viewer used to display the Atari World Profile database. If you're still using the version from issue one Reader disk you should replace it with this version. ST-Guide runs as either a desktop accessory or program (rename ST-GUIDE.ACC to ST-GUIDE.PRg).

Atari World Profile

Exclusive • Joe Connor

Database for issue seven in ST-Guide format. The database now covers the first seven issues. To maintain your database you may prefer to create a separate database disk which can easily be extended each month:

Use AWBAKUP.TOS to make a copy of the Reader Disk.

On the copy delete everything apart from the GUIDES folder.

Each month copy the contents of the latest Reader Disk GUIDES folder to the GUIDES folder on your database disk – some files will be overwritten each month, this is normal.

Optionally add a copy of ST-GUIDE.ACC and ST-GUIDE.INF to create a stand alone database boot disk.

As usual everything on this month's Reader Disks are covered inside the magazine. To make it easy to back up your Reader Disks a copy of AWBAKUP.TOS, specially programmed by Ofir Gal, is included each month. Simply run AWBAKUP.TOS and follow the on-screen instructions; the program even formats the disk for you. We recommend you always store your original disks in a safe place and don't use AWBAKUP.TOS for any other purpose.

Reader Disk problems

In the unlikely event that a Reader Disk won't load or gives you any other problems, disconnect all peripherals, switch off your computer for at least 20 seconds and try again. If this doesn't solve the problem, return the disk to the Atari World Disk Sales address clearly labelled Atari World faulty disk and enclose a self addressed envelope. Your disk will be tested and replaced or returned as quickly as possible.

Should you require technical help, call the Atari World Disk helpline on Wednesday evening between 7pm and 9.30pm on (01206) 852602 or leave a message on the answer phone outside these hours.

SEE PAGES 40-41 FOR ORDERING INFORMATION AND BACK ISSUES



ATARI ST/E

Floppyshop

DEPT. AW8, PO BOX 273, ABERDEEN, AB9 8SJ

Partners: Steve Delaney & Irene Lamb



FALCON 030

Quality and Service

At Floppyshop we only stock the very best software. All our ST disks are double sided and are crammed full! In addition, our catalogue disks are the most detailed in the UK and cost just £1.00. Please state ST or Falcon. Same day despatch on orders. Credit card orders are welcome (minimum value £2.00). Unless otherwise stated, all disks cost £2.00 each and run on a standard machine with 512k of memory (1 Meg if it's a Falcon) upwards.

COLOUR OR MONO - Disk numbers ending 'C' i.e. GAM.10C are for COLOUR. MONITORS OR TV'S ONLY Disk numbers ending 'M' e.g. ART.63M are for MONO MONITORS ONLY. **RGB or VGA** - Indicates the monitor type required for a specific Falcon program.

THE TWELVE DISKS OF CHRISTMAS!

CLIP.121 FLOPPYSHOP CHRISTMAS CLIP ART COLLECTION 1 - A compilation of almost 70 different items of seasonal clip art in IMG format.
CLIP.3502 FLOPPYSHOP CHRISTMAS CLIP ART COLLECTION 2 - A collection of over 40 more individual items of seasonal clip art in IMG format.
DEM.161C CHRISTMAS DEMO By The Norwich Atari User Group - A graphic animation (with seasonal music) centering on a small town of about 100 years ago.

DEM.657C CHRISTMAS MUSIC - Ten Christmas tunes to listen to.
DEM.842C HIBERNATION CAROLS DEMO 1 - A selection of ten tunes is available from the main menu. Each loads up with its own seasonal picture.
DEM.3072C PIXEL TWINS XMAS DEMO - Move Santa around the room checking out the sub demo, switch on the Xmas tree lights or have a drink!
DEM.3479C HIBERNATION CAROLS DEMO II - Collection of 6 Xmas Carols featuring superb graphics (Santa on his snow-moblie!) and music.
GAM.228C DC SNOWBALL FIGHT By Double Click Software - 2 player game that simulates all the thrills of this popular winter pastime. Needs 1 Mb.
GAM.3310C A WINTER'S TALE - Followup to Dizzy Lizzy with transporters, switches, grave stones, snowballs, exploding Xmas puddings and more.
GAM.3341C SANTAWRK - Santa must be bounced on a trampoline to collect candles as they move across the screen.

MID.21 Mididemo - Gives you a choice of 8 Christmas carols to listen to on your Midi keyboard.
MID.3578C MIDITREE - Flashes lights on a Christmas tree in time to music, in the form of MID files. 20 files appropriate to the Christmas season are provided.

CLASSIC GAMES

A collection of 30 of our most popular games disks amassed over the years. Send £1.00 for the full catalogue to check out the other 300+ games disks that we don't have space to include here!

GAM.87C BUBBLE TROUBLE - Guide your bubble around the screen collecting pills but watch out for the other bubbles!
GAM.131C ELECTRONIC JIGSAW PUZZLE - Jumble up a picture and do your best to reconstruct it. **TREASURE SEARCH** - Superb game where you must explore a desert island and locate the hidden treasure. Fun for all ages.
GAM.148C HARRIS WENT SKIING - Guide Harris across a busy road to collect his skis, then it's off to the downhill slopes. Based on an old ZX Spectrum game.

GAM.198C LLAMATRON - Jeff Minter's classic fast action shoot 'em up.
S-GAM.215C & S-GAM.216C NAME THIS SONG - A two player game in which the aim is to recognise the tune being played. Can output to Midi keyboard or monitor speaker. £3.50.

GAM.250C CRICKET, TENNIS, BLACKJACK, DRAUGHTS, BREAK-OUT and MOTOR CYCLE RACING all on one disk!
GAM.251C PENGUIN - Guide four penguins around the screen, moving arrows, bridges and other objects to ensure a trouble-free journey. Frustratingly addictive.

GAM.3008C MICHAEL'S BIG ADVENTURE - A very basic graphic adventure designed for children aged 8 years upwards. Mouse controlled, no typing required.

GAM.3153 VIOLENCE - A Xenon 2 style shoot 'em up. Fast arcade style action with lots of extra features built in.
GAM.3194C FRUIT PURSUIT - The best features of a fruit machine combined with the usual elements of the average board game. **JIGGERS** - A multi-level brain teaser in which you must turn all the pieces in the playing area to the same colour.

GAM.3263C ROCKETBALL - Futuristic rollerball type game which involves getting a ball into your opponent's goal and beating them at the same time!

GAM.3270C OZONE - A combined platform and puzzle game where the object is to get to the top of the tower within the time limit.
GAM.3272C INTERNATIONAL CRICKET - Choose your team and your opponents and battle it out on an international stage.

GAM.3278C HUNT FOR GREY NOVEMBER by Martin Ribbink - A submarine has been stolen by terrorists, your mission is to destroy it from the air whilst flying your Lockheed S-3A Viking. Needs 1 Mb.

GAM.3330C GNUCHESS v4 - An excellent chess simulator with a variety of functions available, including a piece editor, numerous skill levels and a help feature.

GAM.3337C ROLLING BLASTERS - Fast moving action as you guide a ball through a number of routes to a goal at the bottom of the screen. Go off the pathway and you lose a life, take too long and you'll run out of time.

GAM.3339C LUNCHY - A classic adaptation of the Hunchback game from days of old. Closely follows the original game and is just as addictive.

GAM.3340C MARS MAZE - Frantic multi-level platform and ladders action played against a strict time limit!

GAM.3348C FAST FREDDY - Guide Freddy around several different landscapes, including islands, deserts and snow covered mountains, and destroy the evil Tikit.

GAM.3569C CHAOS - A game of magical combat between 2 - 8 wizards, held in an arena. The computer can control any or all of the wizards. Needs 1 Mb.

GAM.3570C GRANDAD AND THE QUEST FOR THE HOLY VEST - Help wheelchair bound Grandad to find his vest before the battery in his electric wheelchair runs out! Needs 1 Mb.

GAM.3674C NOSTRAM - A platform and ladders type game where your quest is to recover five hidden crystals. You can gain money, power ups and keys to aid your task, but a variety of creatures are out to stop you.

GAM.3689C STONERAIDER - A boulderdash type game where you must collect gems from beneath the earth, but avoid the falling rocks.

GAM.3742C WORLD FIGHTING CHAMPIONSHIP - Compete against the computer or another opponent in this classic beat 'em up.
S-GAM.3743 & S-GAM.3744 PSYCHO PIG 2 - Some baby crows have been kidnapped and it is your job to mount a rescue mission! £3.50
S-GAM.3822C & S-GAM.3823C GRANDAD 2 - Grandad's got himself a motorbike and gone to the park, but he can't find his sandwiches! Can you help? Great fun. Needs 1 Mb. £3.50.

GAM.4162C RUMBO - Guide your cute little character through the maze shooting baddies as you go. Includes some platform elements, some jumping and shooting, with good graphics and sound effects.

Other Products Available

DegasArt Parts 1, 2 & 3

The highly acclaimed three disk graphics tutorial package has been upgraded to v3. Well written, easy to follow tutorials combine with 120 quality illustrations giving you a step by step guide to creating your own masterpieces on your ST. As well as delving into every significant feature of Degas Elite, DegasArt takes you through the basics of reproducing artwork on a computer and guides you through the 'tricks of the trade'. As most of the tutorials discuss general graphic techniques, these can be equally well put into practice with EZ Art Professional, True Paint, Pixart, Canvas, Deluxe Paint, Fair Paint, Cyber Paint or indeed any other ST graphics package, including the vast range of titles available in the Public Domain. If you want to learn to draw and paint on your ST (or improve your existing skills), DegasArt 3 simply cannot be beaten.
DegasArt 1, 2 & 3 come together as a three disk set for the incredibly low price of just £12.00 + P&P (UK free, Europe £1.50, rest of world £3.00). Existing users of DegasArt parts 1 & 2 can order part 3 on its own for just £5.00 + P&P (UK free, Europe £1.00, rest of world £2.00).

Easy Stitch

Easy Stitch is a cross stitch pattern generator. It lets you convert graphic files into cross stitch patterns or create your own using a grid on screen. This computer based variation stands head and shoulders above the traditional graph paper method as it allows blocks of stitches to be copied, rotated, enlarged or reduced to suit. In fact you can even edit the individual stitches. Patterns up to 10 feet by 8 feet can be created easily on your ST and printout is supported to most common dot matrix and laser printer types.

Easy Stitch is the leader in its field, being the only cross stitch package to support the creation of the more complicated back stitch and half stitch. An ideal Christmas present, especially at the low price of just £19.95 + P&P (UK free, Europe £1.50, rest of world £3.00).

Easy Text Pro Vector

At last, quality Desktop Publishing is within everyone's grasp with the highly polished, yet budget priced Easy Text Pro Vector. Create your own leaflets, brochures, newsletters and business stationery easily with this well documented, easy to use package. This version makes full use of the increased flexibility offered by SpeedoGDOS and NVDI 3, giving crisp, clear output on all types of printer. Now available at the 'silly' price of just £19.95 + P&P (UK free, Europe £2.00, rest of world £5.00). Can you really afford to be without this product?

Easy Text Pro Vector needs 2 Mb of memory and a hard drive or 2.5 Mb if you don't have a hard drive. SpeedoGDOS 4 (or later) or NVDI 3 are also required.

Easy Text Pro

This is Easy Text Pro Vector's 'little brother' with most of the functionality of Pro Vector but tailor made for users who do not have SpeedoGDOS or NVDI 3, and are short of memory. It runs on a basic 1 Mb ST and does not require a hard drive (although we do recommend that you have one). Easy Text Pro is also available for just £19.95 + P&P (UK free, Europe £2.00, rest of world £5.00).

OMEn Multi-Tasking Operating System

Designed as a cross platform operating system, programs written for OMEn on the Atari will run without modification on a PC, Mac or Amiga running OMEn. OMEn completely replaces TOS and GEM, providing fast, compact (in terms of memory usage) true pre-emptive multi-tasking OS. This full version offers lots of extras over the Shareware version and is only available from Floppyshop in the UK. The OMEn operating system costs £20.00 + P&P (UK free, Europe £2.00, rest of world £4.00). Please note that OMEn does not run TOS or GEM programs directly, although their source code is easily adapted if you have the OMEn Developers Kit.

OMEn Developers Kit

The full developers' kit including the massive programmers' reference guide on disk. The two disk package includes an assembler, disassembler/debugger, and a C startup and interface library (you can create your code in any ST C compiler). The OMEn Developers Kit has deliberately been priced low, so as to bring aspiring new programmers into the fold. The OMEn Developers Kit costs £12.00 + P&P (UK free, Europe £2.00, rest of world £4.00).

EZ-Art Professional v1

This is a well documented, easy to use graphics package which is simply crammed with features. Over 20 different types of shapes are supported and over 20 different effects can be applied to blocks. EZ-Art Pro is STE enhanced, making full use of the extended colour palette. There's a built-in colour fill designer, support for up to ten workspaces and almost 20 drawing tools and modes. What's more, the package runs on a 520! Ratings - ST Review 90%, ST Format 83% and voted Graphics Package of 1994 by ST Review readers. Now available for just £19.95 + P&P (UK free, Europe £3.00, rest of world £5.00).

Christmas Special Offers

1. Buy any **TWO** of the following: EZ-Art Professional, Easy Stitch or Family Roots II and deduct £5.00 from the combined cost with our compliments.
2. Add DegasArt to either of the above special offers for just £10.00.
3. Order any **FIVE** disks from this advert and get a catalogue free of charge. Limited to one per household.

PLEASE NOTE:- Overseas postage rates apply in all cases. These offers expire on 31st January 1996.

FALCON 030 SECTION

We were the first to support the Falcon and now have almost 600 HD disks in our library. The Falcon catalogue costs just £1. Falcon disks cost £2.00 each unless otherwise stated. Please note that the disks in this section will NOT run on an ST or STE.

ART & GRAPHICS

F3933 KANDINSKY 1.73i - Latest revision of this popular object oriented drawing package. Also included is a demo of Kandinsky 2 which supports 256 colours in objects, iconification, drag and drop, iconification, Calamus CVG files, Freedom, FPU support and more!

F4368 GEMVIEW 3.15 - Latest version of this popular file conversion program. Supports over 40 file formats! New features include colour scale adjust and improved colour dithering algorithms. **JPEG DECODER** - Reduces loading time on JPEGs by at least 300%! More conversion programs and viewers also on disk.

F4659 SPEED OF LIGHT v3.8 - Powerful image viewer, slideshow utility and more. Converts images to different resolutions, scales them up and down and includes some image processing features. **KEFTAL 24** - Creates textured backgrounds and keftal graphics. **FLY SHOW** - Runner program for FLI/FLC animations.

F5277 GVMOD030 - External image processing modules for Gem-View 3.xx. **IMCON** - Converts between graphic file formats. **MOV-POV** - POV shell which supports animations. **VIRTUAL SCREEN IMG VIEWER** - Scroll around outside IMGs. **SPOOKY** - True Colour sprite designer. Needs 4 Mb. **PICFIB** - Slideshow which allows tagging of images to specify which images will be shown.

COMMUNICATIONS

F5292 STARCALL - A combined terminal emulator, bulletin board and fax modem package. The fax modem software is the best available! **OASIS** - Everything you need to get connected to the Internet. **SET DEV 7** - Sets device 7 as the default modem port. **XYZ MODEM 2** - Patched version of XYZ Modem for the Falcon.

GAMES

F4779 STARBALL - Once described as the best Shareware game ever! A massive pinball game with lots of bonuses, sub-games, bonus games and three sets of flippers. An all time classic.

F4781 SHOCKER 2 - HOUSE OF GAMES - Colour version of the puzzle game where you guide your marble around the screen collecting hearts. Plenty challenges, lots of levels. Supports multi-player option via RS232 or Midi. **TOMTAR** - A fast action blast 'em up.

F5022 SWITCH - Having escaped from the dungeon, you must negotiate the labyrinth. Switches to operate in sequence, keys to collect, transporter pads, magic squares, crumbling pathways and more... Top class graphics and sonics. RGB Only, Needs 4 Mb.

F5083 COLUMNS - Tetris clone where different rows of blocks cause different reactions. Is this the best Tetris clone yet? Highly addictive fun! Needs 4 Mb.

F5172 ZODIAX - Fast action horizontally scrolling shoot 'em up. Smooth scrolling, massive sprites, realistic explosions, superb sound effects and sampled speech. Needs 4 Mb. Two more great games on disk.

MUSIC

F3962 WINREC - Direct to disk recording. **WINCUT** - Sample editor for use with Winrec. **Five To Five** - Converts between popular sample formats, different sample resolutions and mono and stereo. Also on disk, 7 different MOD file players.

F4457 DELUXE MUZAKK ZERBASTEL KIT - A Soundtracker inspired package which supports the playing of up to 10 tracks in real time using the DSP. In contrast to tracker programs, DMZK allows up to 42 samples of any length to be used in your compositions. **Winrec** and **Wincut** required if you want to create your own samples. VGA Only, Needs 4 Mb.

F5303 SWEET 16 LITE - Cut down version of a 16 track pattern based MIDI sequencer. **EKED-M1** - An editor/librarian for the Korg M1/M1R. **GEMREC** - Two track direct to disk recording program. **MUSIC ANALYZER** - Monitors an incoming signal, displaying real-time data for each channel. **SMF PLAY** - Player program for MIDI files. **ST2MIDI** - Converts chip music into MIDI data. **TIME IS MONEY** - Converts between tempo and note values, expressed as units of time.

PROGRAMMING

F5307 STOS BASIC FALCON EXTENSIONS - Collection of extensions which allow STOS Basic to make use of the Falcon's improved hardware. Play MODs, display 256 colour pictures, switch on/off cache, run STOS from Falcon resolutions, play stereo sound samples, use virtual screen resolutions and much more.

UTILITIES

F4351 THE ARCHIVERS COLLECTION - All the popular archiver programs on one disk. Includes ARC, LZH, ZIP, ZOO, ARJ, UUE, MAGIC SHADOW ARCHIVER and several shells and ancillary programs.

F4451 MOUSE KA MANIA II - Change the appearance of your mouse pointer, even animate it! **MULTI-BLOW** - Increases resolution on RGB monitors. **XLATOR 2.04** - The full registered version of the German to English translation program.

S-F4494 & S-F4495 SUPERCARD BIBLE COLLECTION - The entire texts of the Old Testament and New Testament in Supercard format. Searches through 4.5 Mb of data in seconds (on hard drive). Includes Supercard 3. £3.50.

F4555 OCR 1.4 - Convert scanned pages of text back into ASCII. Feature packed and includes the ability to auto-learn typefaces. **EVEREST 3.5E** - The most fully featured text editor available. **VOXMAIL** - Turn your Falcon into a jizzed up answering machine (needs additional hardware). **CD ROM** - MetaDOS and a Falcon specific driver which lets you read any ISO 9660 CD ROM.

F5300 VCR DOCTOR - Fault finding guide for broken down video recorders. **COMPOSE CHARACTERS KEYBOARD DRIVER** - Type 'foreign' characters easily on UK keyboards. **REMOTE CONTROL** - CPX modules for accessing the internal fonts and other settings on the HP Laserjet 4 series. **BOOT SECTOR** - Create your own customised bootsectors. **DESK PATCHER** - Allows overscan in ST compatible modes. RGB only.

PAYMENT DETAILS:- All prices include postage in the UK. Overseas orders welcome. Please add £1 per order for Europe and 10% of order value (£2 minimum) Rest of World. Overseas customers please note - We can only accept payment by credit card or in UK currency (cheque drawn on a British bank is recommended). Cheques should be made out to **FLOPPYSHOP**.

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http://exxos.www.tinet.com/UK/ULS/Atari/last/



Letters

Not hands on?

I was looking forward to the tutorial on Timeworks 2.04 in issue 7, Atari World, November 1995, having previously enjoyed the experienced writings of Günter Minnerup in Atari ST Review, ST Applications and other forums. To be of use to the reader, a tutorial, as its name implies, should be designed to teach (tutor) the reader in an easy step by step guide giving easy to follow examples.

Some writers lose the ability to revert to basics to effectively carry out this function and assume far too much knowledge of the reader, as in this case. Set up your Atari, load Timeworks 2 then try to reproduce the diagrams given on pages 49 to 51, without having had many hours of previous learning curve with the program in question.

For me this is an almost impossible task as much of the detail required to exactly reproduce the diagrams is absent from the tutorial. For example, there are no indications of the position of the print on the page, no sizes are given for the frames for the logo or exactly where to position them, no mention of text/font size to use for the logo or what type of font Günter used or how to achieve the compliments slip.

Many of the attributes used to achieve the desired effects were absent making the article a tribute to Günter's ability to excel in the use of Timeworks without fulfilling the purpose of the article for the reader, who, based on the information provided would not be able to recreate Günter's achievement or produce their own masterpiece by example. In teaching there is a saying for

Right to reply
Put pen to paper and speak
your mind in *Atari World's*
letter pages...



the presentation of information in such circumstances, "KISS", Keep It Simple Stupid, which will not offend the experienced either. So how about a proper tutorial please?

Brian McNulty, Bridlington

Well you can't please everyone! We gave Timeworks away in issue 4 and provided no less than 11 tutorial pages in ST Source. In issue 5 we went into a fair amount of detail on fonts and typography - another nine pages in fact. In issue 6 Nial Grimes covered big fonts and text, most of which was Timeworks specific. By the time issue 7 came round - and you'd been playing with the program for three months, I reckoned it was time to skip some of the obvious stuff and get down to showing it off a bit.

Günter is a top notch operator and has done plenty of amazing design work over the years. His tutorial wasn't intended to be a "click here,

press that" affair, it was aimed at people who had found their way around the package and wanted to do something a little more stylish. Sorry it wasn't what you wanted but if enough people feel the same way, we'll see what we can organise!

Hello again!

I saw my letter in this months issue of *Atari World* and would just like to put straight my comment regarding Atari, Ocean, and the Theme Park game - I now realise it was not very clear. I meant that the wording on the packaging of the box - ie where it says 'Battery Back-up lets you save all your developments' was misleading, and that when I wrote to Atari saying that they had licensed this product with the misleading box, they said they had no involvement with it but when I wrote to Ocean about it, they said to take up the gripe with Atari...

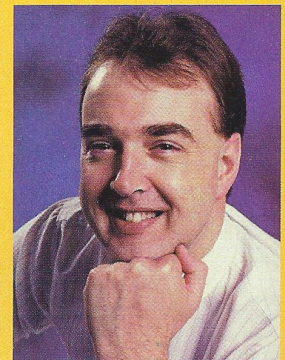
By the way, I have just

started University and so now have access to the Internet myself and was very interested in the HENSA article - does Atari World have a WWW site, and if not, are there any plans? I look forward to reading the Lynx feature, and of course the rest of Atari World.

James Marson via the Internet

I guess your original letter makes more sense now. I suppose you could try your local trading standards people and see what they have to say. That might get some action but as the game does have some kind of save facility, it's a bit of a weak case. I could think of several games with the words "exciting, incredible and

Write On...



Got something to say? Think I'm too grumpy? Or maybe too lenient? Hate the look on that smug, smarmy, self-satisfied face? Don't blame you. Write to me at *Atari World*, either at the address at the end of the magazine or via e-mail to andwright@cix.compulink.co.uk.

unique" on the packaging that have all ended up under my son's bed (a fate worse than death) or passed on at car boot sales. At least we've made everyone aware of how crap Theme Park's game save is on the Jaguar...

Well, welcome to the Internet. I hope you enjoy it. Personally I find it incredibly over-rated in many ways - people are rushing to get on and then getting let down. I find the email very useful, especially when dealing with people in the US, but the WWW is a waste of space in my opinion - it's very sluggish, even via Pipex which is one of the best providers around, and it costs me an arm and a leg to access it from my home in the wilds of Lincolnshire.

By the time you read this, I'm hoping that I'll have moved even further into the wilderness - with a real log fire to play with. Anyone know if there's a magazine called *Real Log Fire User*? I think I need some very basic tutorials for that. Anyway, I'd much rather snuggle up on the couch with a good magazine like *The Web*, *Net* or *Computer Shopper*. The only trouble with *Shopper* is that your arms get tired after a few minutes but you know what I mean...

Right then, enough of my ramblings. We'll be answering the need for a good comms tutorial just as soon as we can fit it in. And don't expect to get your name in every month!

System non-solution?

Please find enclosed copies of my unanswered correspondence with Karl Brandt, Managing Director of System Solutions and Technical Director of your magazine.

I shall summarise the situation for your readers, should you choose to publish this letter:

In December 1993 I bought a fairly large Falcon package from System Solutions, including an AOC 15" colour monitor. I had been very pleased with the service I received (Mr. Brandt himself had helped advise me on my order) and was delighted with the system until mid-March this year when the monitor

developed a fault. As I rely on the system for much of my University work, I submitted the monitor to System Solutions for repair, noting their quoted "normal turnaround time of 7-10 working days or faster, depending on the workload in the workshop".

My University accommodation makes it difficult for me to gain access to a telephone, so I had requested that any communications be directed to my home address, who would be able to pass on a message. However, it took five telephone calls by me and nearly a month before I was even given a description of the fault and a quote for the repair. The line-output transformer had failed and the estimated repair cost was £110 including parts. I was told in several of the calls that the monitor had been passed on to an engineer outside the workshop, but of course my agreement was with System Solutions who are liable for the actions of their subcontractors.

When I discovered the cost of the repair, I requested that the circumstances of the failure be communicated to the manufacturers when obtaining the parts, since some manufacturers are sympathetic to those who experience such faults just outside the guarantee period. The response I received from a gentleman at System Solutions suggested to me that this would not be done.

In June I wrote to Karl Brandt, complaining about having heard nothing about the progress of the repair since being given the quote and requesting a written response. To date I have not received a reply.

I write to you because I am aware of the importance of *Atari World* to those intending to make Atari related purchases.

On a lighter note, I am delighted with the new magazine. I confess to being a little disturbed by the dilution of the first two issues with pages of back-slapping but I am pleased that issue three lived up to my expectations.

J Morrissey, Gloucs

Let me start by dispelling

any notion of bias, which you appear to be hinting at in your first sentence. *Atari World* is an editorially independent magazine. Yes, it is partly financed by people from inside the industry (like many other computer magazines, I might add) and yes, Karl Brandt and Neal O'nions do have a say in its general direction.

However if any attempts were made to "adjust" reviews or brush complaints under the carpet the magazine would soon find itself without an editor. I can't speak for anyone else but I strongly suspect it would swiftly be without a features editor and a technical editor too. Oh and I doubt we'd have many reviewers queuing up to write for us either.

With regard to the specifics of your complaint, I'm no trading standards expert but I have some difficulty in seeing quite what your problem is. I'll be the first to admit that System Solutions appear to have been a little tardy in getting back to you and have let you down. You can rightly grumble at that. When I spoke to Karl Brandt about your case, he was very frank about that. However, even if you had accepted their quote, the company would have lost money in time and effort spent tracking down the problem and finding someone qualified to fix it. He also told me that AOC won't replace the faulty part free of charge. If I was an AOC shareholder I'd be complaining if they did.

The fault boils down to simple component failure that occurred after the warranty was up. End of System Solutions' responsibility. You're obviously one of the something-for-nothing brigade - in my opinion the Atari scene can do without people like you.

Multitasks

There's been a lot said about multitasking operating systems but it has struck me I don't know the first thing about them, other than they allow you to do several things at once. May I suggest then a future AW article be spent on them? Things like how they work (basically), what advantages and

disadvantage they have, and a comparison test on the leading 3 or 4 (if there are that many). There could be something on how to optimise one package. Perhaps you could spend a whole Pro issue on OS in general, what you could upgrade to, in addition to TOS 2.06. Anyway, I'm sure you get the idea...

While I'm rambling, I thought I'd ask about the distribution of AW. When did the last issue (November (7)) actually go on sale? There seems to have been quite a bit of concern about the availability. I haven't been able to get my copy yet from my local newsagent who has so far has had no problems - he orders it especially for me from a warehouse (WH Smith I think) but I haven't received it yet. I'll carry on trying though.

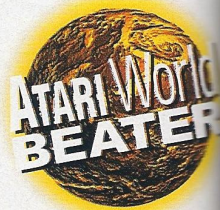
Can you tell me when the *Atari World* magazine is going to be on sale as yet again it is over a week late. I intend subscribing to the magazine but haven't yet done so due to the erratic distribution. That said, it is a first class magazine with the ideal mix of subject matter for my tastes. Keep up the good work but sort the distribution out.

Dinwood@delphi.com

I'll file the multitasking idea away - why not? As for the magazine, well there's basically one bloke at fault here - me. I'm not as organised as Vic Lennard, I freely admit, and sometimes the schedules seem to get all kind of mixed up, if you see what I mean. I'm not as bad as Ofir, of course, but working with him obviously has some effect. I keep thinking that as it's Sunday I should put my feet up or watch TV or something. Bit of a cheek really.

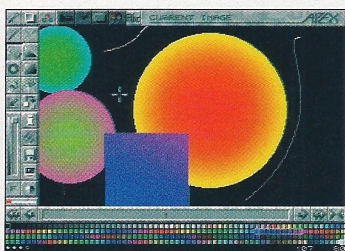
If erratic distribution is putting you off subscribing, I can't answer that. If more people would subscribe instead of wasting petrol and bus fares going from newsagent to newsagent, we'd all be better off. And if we were better off, we'd work harder at time-keeping. Honest! Anyway this magazine is late as I write so I guess I'll have another angry postbag to answer next month... Oh dear.

Get Intro the *Groove*...



Apex can now be yours for under forty quid! Nial Grimes dabbles with true-colour graphics, the Intro way...

You've heard it said often enough: Apex Media is an outstanding piece of software. However, at a shade over a hundred quid, it certainly isn't cheap, and being "worth the money"



A good range of primitive drawing tools backs up the impeccable animation tools.

doesn't usually cut a lot of ice with bank managers, girlfriends or wives. It's a problem that the good folk at Titan are well aware of and Apex Intro is their solution. The formula runs thus –

take Apex Media, rip out one or four specialised workstations, and Bob's yer uncle, you've got Apex Intro; £39.95 to you, guv'nor.

At first glance, the degree of meddling seems quite severe – Morphing has disappeared along with the Image filters, and the non-linear drawing tools have also gone for a burton. However, once you load the package you realise that the dreamy animation interface is still in place and the whole thing still runs at a terrifying speed, despite the low price.

Power without the price

Yes, you can still do an awful lot with this baby Apex. At its heart lies a range of practical drawing tools – box, line, polygon, curve, ellipse, and each can be treated to a graduated fill if the occasion demands it. All work takes place on a fully adjustable canvas, and pictures can spread beyond the bounds of the screen, memory permitting. As a bit of a coup, Intro has some canvas size presets, unlike the full Apex package.

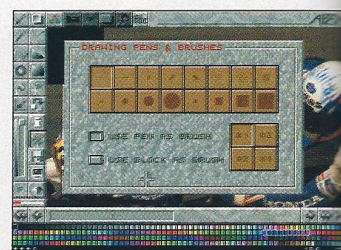
The cell workstation – read block

handling – is outstanding too. You can twist and rotate any chunk of graphics with a simple flick of the mouse and all updates take place in realtime. Of course, animation follows by adding an extra frame; another single-click operation. Text can be squeezed in afterwards with the help of standard Calamus fonts and your creations can be saved to disk as a universal FLI file.

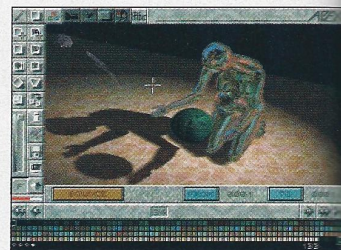
In fact, if it weren't for the greyed out workstations, you'd think you were using the full Apex package – the interface has lost none of its charm in the transition from professional to budget status. This is reflected in the manual, which is shared by both packages. As a sectioned tome, this isn't too much of a problem when learning which button does what, but some of the tutorials are rendered useless, unfortunately.

The bottom line...

True, Apex Intro denies you the instant gratification of a morph or the sheer pleasure of warping a famous personality and if you've worked with the full Apex package, it's easy to miss the non-linear workstation too. However, the solid range of drawing tools, excellent block manipulation facilities, and thoughtfully designed interface make it a package that does feel complete in its own right. Besides, you can always throw another sixty quid in Titan's direction and upgrade to the full Apex package – nothing to lose my friends!



Only the greyed out workstations betrays Intro – in all other ways, it's a fully functioning copy of Apex.



True-colour animation is a piece of cake for Apex Intro!

What's Missing?

For the prosecution:
No digitising workstation
Lacks morphing and warping
Farewell non-linear drawing tools
Adieu film and image filters

For the defence:
Canvas size presets
It's only forty quid

Verdict:
Case dismissed!

Intro shares Apex Media's excellent block manipulation facilities – fast, powerful and easy to use.



A P E X I N T R O

Publisher: Titan Designs
UK Distribution:
Contact: 0121 693 6669
Price: £39.95

Requirements: Falcon '030, 4Mb of memory, hard disk recommended.
Pros: Cheap • fast • powerful
Cons: No non-linear drawing tools • lacks dedicated manual

SCORE: 9

**The best selling animation & art program
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A low-cost solution

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The complete graphics package for the Falcon, is now available as a low-cost solution - APEX Intro - while retaining all the flexibility and versatility of the highly successful APEX Media.

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All prices include VAT @ 17.5%

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e-mail: 100345.2350@compuserve.com

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APEX

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HARD DRIVES

Series 100c hard drives from T.U.S Developments. Superb metal case (vertical or horizontal mounting), very quiet cooling fan, internal power supply, device selector, dual SCSI parts and interface for ST or Falcon. All systems are supplied fully set up with all cables and accessories - Just plug in and go

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High Density drives read/write to both normal DSDD and DSHD disks with fully automatic switching.

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520 to 1Mb £29.99	520 to 2Mb £45.00
520 to 2Mb £69.99	520 to 4Mb £89.00
520 to 4Mb £113.99	FOR OTHER VARIATIONS ON
1MB XRAM AND DOUBLE SIDED DRIVE £69.99	UPGRADES PLEASE CALL

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All monitors include a Tilt and Swivel stand	
TUS 14" Mono monitor for ST series without sound	£89.00
TUS 14" Mono monitor for ST series with sound	£99.00
TUS 14" colour for Falcon (0.28dp SVGA)	£229.00

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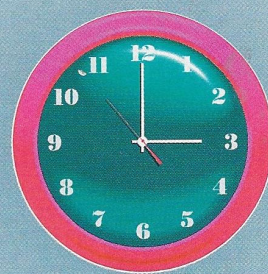
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Step back in time!



Nial Grimes grabs a leopard-skin loincloth and steps back in time with **Evolution Dino Dudes**.

Mankind's journey from prehistoria to the technological nineties was no easy ride. You may think that primaevial humans spent their entire life painting cartoon animals on cave walls in France for the benefit of school children thousands of

years later, but there were also much more important issues to consider; discoveries such as fire, the spear and the wheel all needed to be tamed, and that's

to say nothing of shrink-to-fit jeans and space hoppers.

Dino Dudes allows you to get involved in this development, by giving you life or death power over a band of bumbling prehistoric humans, in a quest to conquer eighty platform-infested levels. Dinosaurs and many other obstacles litter the path to victory. Pass that PowerPad - this should be a piece of cake...

My brain aches...

Lemmings is the obvious influence as far as gameplay is concerned, but you do have a much greater degree of control over the characters; in other words, they don't go running off the nearest cliff unless you expressly tell them to!

Right from the very beginning, the guys have the ability to stand on each other's shoulders and mastery of this feat will be needed to complete the first level - the discovery of the spear. In an attempt to keep you hooked through all nine billion levels, new objects are introduced every now and again; the spear is quickly



followed by fire, and it's not too long before the wheel arrives on the scene, providing the ability to "ride" across chasms.

The style of play also varies - some stages demand speed and precision (quickly stacking a pile of dudes, for instance) while others are content with less manual dexterity and instead put your brain through its paces. A time limit complicates matters, and you're also cursed with a limited number of dudes - twelve on the hardest setting, ten or eight on the easier modes. Sometimes it is necessary to sacrifice a player in the interests of completing a level. For instance, dinosaurs tend to lose interest in all other dudes when they've got their teeth into a human. These necessary casualties can be replaced by freeing caged "lives" that appear from time to time.

This is probably beginning to sound a bit too much like hard work, but fortunately you can return to any level with the help of the password system, and in common with most parts of Dino Dudes, even this minor screen is decked out with humorous animated touches.

Later levels are much trickier, demanding the use of several skills.

How long?

In fact, you are looking at a perfect translation of the Jaguar game here. The graphics are well defined and the scrolling is every bit as smooth as you'd expect from a machine of the Falcon's calibre. The music is no disappointment either; being of the cheery, bouncy variety it will get on your nerves after a while, but that's true to say of almost any game of this type.

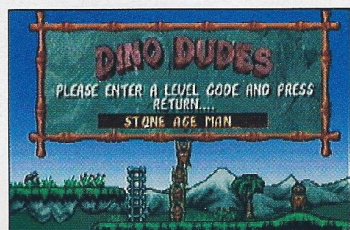
Only questionable long-term playability casts a shadow of doubt over the whole experience. Despite noble efforts to keep you hooked, it would still have to be a very special person that played the whole thing from beginning to end. Nevertheless, if you appreciated Lemmings' mixture of frustration and entertainment, and can handle a challenge then consider volunteering your hard disk for a Dude invasion immediately.



Humour plays a strong role in Dino Dudes - the cut scenes are bound to raise a smile!



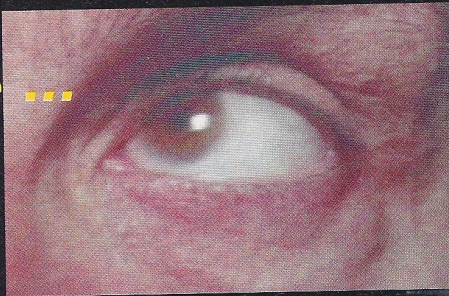
Each human has basic stacking skills - extra abilities need to be earned!



You can return to any level with the help of the password system.

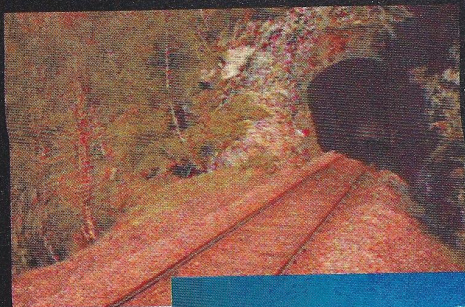
EVOLUTION DINO DUDES	
Publisher: 16/32 Systems UK Distribution: Contact: 01634 710788 Price: ETBA	Requirements: Falcon030, 4Mb RAM, hard disk, Jaguar PowerPad. Pros: Classy graphics • humorous gameplay • challenging Cons: Questionable longterm playability
SCORE: 8	

Watch this space ...



exposé

falcon video digitiser



Falcon specific, high-spec video digitiser for capturing live video directly from camcorder or VCR. Supplied with separate RGB Splitter for complete image control.

Supplied with APEX Media art & animation software, Exposé can capture high quality still images up to 24-bit resolution or 16-bit animations can be compiled up to 25 fps.



FalCAM

Picture-in-Picture (PiP) Desk accessory to provide live video images from within any GEM program.

FalCAM Tripod

Advanced true colour digitising support for the creation of high-resolution grabs with control for exposure time and resolution. Exports to JPEG, GIF, TGA & PPM with adjustable dithering and smoothing for JPEG creation. Includes on-screen live video image.

Videobox

Demonstration program which texture maps live video directly onto the faces of a cube, which can be spun and zoomed in real-time.

Tech Spec

- On-board memory - 512KB Static-RAM
- Frame Capture - 40ms (25fps)
- Interface - Falcon bus

RGB Splitter

- Inputs - Composite or S-Video
- Input signal type - PAL or NTSC
- Output - RGB
- Controls - Brightness, contrast, colour, sync and NTSC hue

Resolutions

- Rostrum - Max. 768x576, 24-bit
- Animation (16-bit) - 512x320 @ 6fps
- 256x160 @ 17fps
- 128x80 @ 25fps

Prices

- Exposé (for existing APEX users) - £249
- Exposé with APEX Media - £369



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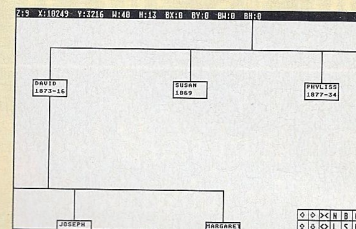
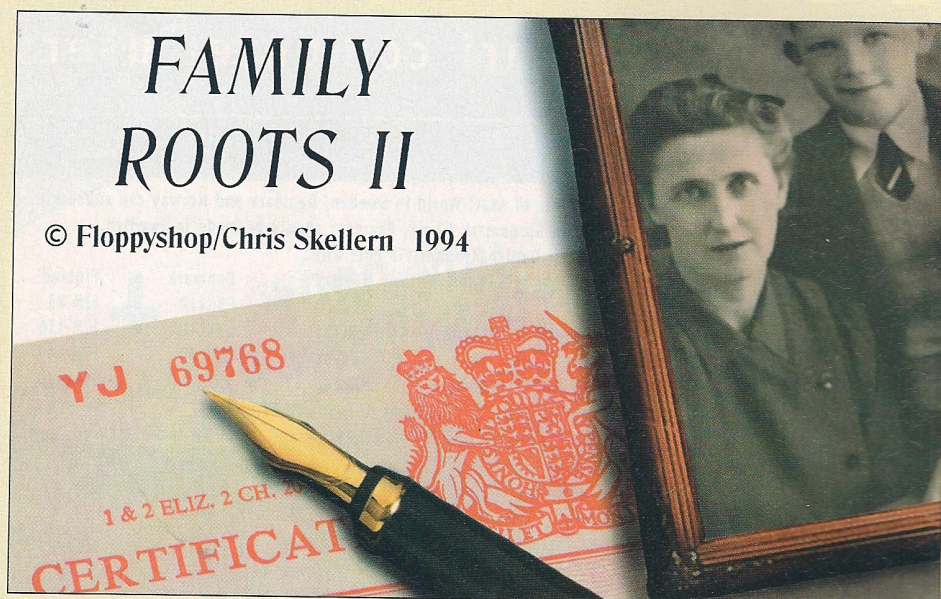
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All digitised images on this page created using
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E & OE. Specification and price subject to
change without prior notice. Prices include VAT.

Family Roots II

Family Roots II is an aid to those researching their family tree. Genealogy is a subject which intrigues most of us but a shortage of professional software and in some cases, extortionate prices, puts most people off getting started. The combination of five years' accumulated work (which has included extensive research into the subject) combined with a tempting £25 price tag, makes Family Roots II the ideal choice for the professional genealogist whilst keeping it within the price range of the amateur. For those who are not familiar with the original release, Family Roots is a program designed to assist those of us who indulge in the pursuit of tracing our ancestry or 'family tree'. Unlike similar products, Family Roots is not merely a customised database. It allows the user to link each individual into the family tree graphically on the workscreen, whilst allowing easy access to its integrated database where the information on each individual is stored.



BROTHERS/SISTERS		
Name: PETER SAMUEL WOODBRIDGE	Born: 15/12/1855	View Zoom
Name: RICHARD DAVID WOODBRIDGE	Born: 7/6/1852	View Zoom
Name: JACK WILLIAM WOODBRIDGE	Born: 2/2/1844	View Zoom
Name: MURREEN WOODBRIDGE	Born: 19/11/1847	View Zoom
Name: DOROTHY WOODBRIDGE	Born: 19/11/1847	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Subject New entry New entry		

Our popular custom written mouse driven interface makes the program easy to use for the beginner, whilst giving access to more powerful features needed by experienced genealogists. Another unique feature of our software is that new individuals can be added to any part of the tree. In other words, you do not have to define a starting point and work forwards. You can add new individuals anywhere within the tree structure and all existing data is cross linked to take into account the new individual's relationship to everyone else in the tree. You can even start an unlinked tree on the workbench, which is separate from the main tree and link it in when you have completed your research and found out at exactly which point it fits in. A powerful search function allows fast cross referencing between individuals.

Family Roots II is fast and extremely economical in use of both memory and disk space. This in part is due to the fact that it is written in 100% assembly language. It is envisaged that an average user with a 520 ST will be able to store details of 100,000 individuals on a double sided disk! We have several users who already have over 2,000 individuals entered into Family Roots.

Marriage No: 1	Date of marriage: 11/7/1927	Date of divorce: _____
☒ Civil Other	Place: ST. ANDREW'S CHURCH	Parish: ST. ANDREW
District: _____	Town: IPSWICH	County: SUFFOLK
Forename: HANNAH	Surname: MEDLOCK	
Hid name(s): _____	Children: 4	Flags: A B C D E F
Born: 5/4/1909	Place: _____	Parish: ST. ANDREW
District: _____	Town: IPSWICH	County: SUFFOLK
Bapt: _____	Place: _____	
District: _____	Town: _____	County: _____
Died: 8/2/1964	Place: _____	Parish: _____
District: _____	Town: IPSWICH	County: SUFFOLK
Subject Next Children Create Delete Search Define ID Link		

PARENT DATA	
FATHER...	
Forename: ANDREW	Surname: WOODBRIDGE
Born: 10/7/1879	Place: _____ Town: ELY
Died: _____	Place: _____ Town: ELY
MOTHER...	
Forename: MARGARET	Surname: SMITH
Born: 11/6/1882	Place: _____ Town: NORWICH
Died: 8/3/1952	Place: _____ Town: IPSWICH
Subject View Parents	

SEARCH	
Name: HARRY JACK WOODBRIDGE	Born: 12/4/1795 View Zoom
Name: DOREEN WOODBRIDGE	Born: 19/11/1921 View Zoom
Name: MIRIAM ANNE WOODBRIDGE	Born: 19/11/1921 View Zoom
Name: HENRY MAY WOODBRIDGE	Born: 13/5/1902 View Zoom
Name: HARRY WOODBRIDGE	Born: 15/2/1904 View Zoom
Name: DAVID STEVEN/SON WOODBRIDGE	Born: 12/5/1909 View Zoom
Name: HARRY/MARIE WOODBRIDGE	Born: 19/12/1926 View Zoom
Name: MARK WOODBRIDGE	Born: 11/1/1910 View Zoom
Entries to search: 118	Entries Searched: 118 Entries found: 105
CATEGORIES: ☒ Civil ☐ Marriages ☐ Misc. ☐ SEARCH WHEN: ☐ ON ☐ OFF SPEED: ☐ FAST ☐ SLOW	
Scroll Scroll Subject Marriages Misc Print Search Screen	

Family Roots II is a major upgrade on the original release and has already become the leader in its field. The package comes with an easy to follow fully illustrated manual and supports print out to 9-pin, 24-pin, Bubblejet, Deskjet and Laserjet printers. Family Roots II is available now for £25 + P&P (UK free, Europe £1.50, rest of world £3.00). A usable demo version is available for only £1.00. Overseas customers please note that payment must be made in UK currency (cheque drawn on a UK bank is recommended).



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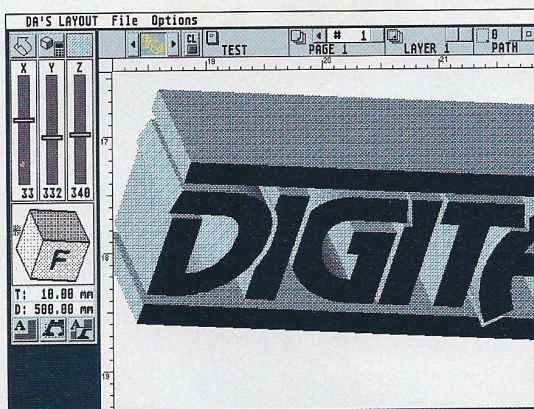
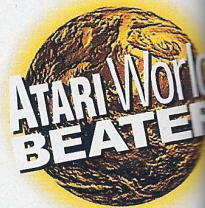


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<http://exxos.www.idnet.com/IMPULSE/atari/last/>

DA's Layout 5.6

Gunter Minnerup is delighted to see that one of the surviving giants of the Atari DTP scene has found a new home with System Solutions.



Ridiculously easy to use with its real-time slider controls and "draggable" light source, the 3D extruder extensions are a real boon for designers.

Once upon a time, when Atari were still in the business of making computers and threatening to take on the PC and Mac for a serious share of the desktop market, the ST was marketed as an ideal DTP platform - and for good reason. It was much cheaper than the Mac and had a much friendlier user interface than the PC. Software houses fell over each other to produce page layout and graphics software for the machine: Pagestream, Fleet Street Publisher, Timeworks DTP, Calamus, DA's Layout were all competing for a slice of the action in what everybody reckoned was a rapidly growing market.

We all know what happened. Atari failed to make a significant dent in the mainstream of professional desktop publishing and eventually withdrew from manufacturing personal computers altogether. Fleet Street Publisher bit the dust, the software houses behind Pagestream and Timeworks abandoned the Atari scene.

Only Calamus and DA's Layout are left, significantly both German products: it was in Germany that the ST and TT came closest to establishing themselves as serious machines, and the user base established during Atari's heyday there remains sufficiently broad to justify continued investment in software

development by DMC and Digital Arts.

Positively dribbling

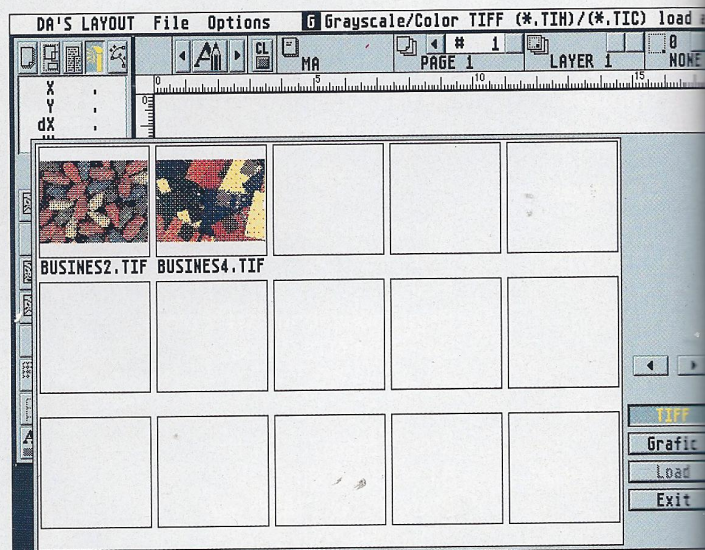
It is impossible to examine the latest versions of one of these two packages today without thinking of the early days and wondering about what might have been. DA's Layout, for example, could be a huge commercial success by now if Atari computers had taken off in the grand way many once thought possible.

The first thing I did when I received the latest version for review was to show it off to a couple of experienced users of those giants of the PC and Mac DTP markets, Quark XPress and Aldus PageMaker: they weren't just impressed, they were positively dribbling with excitement.

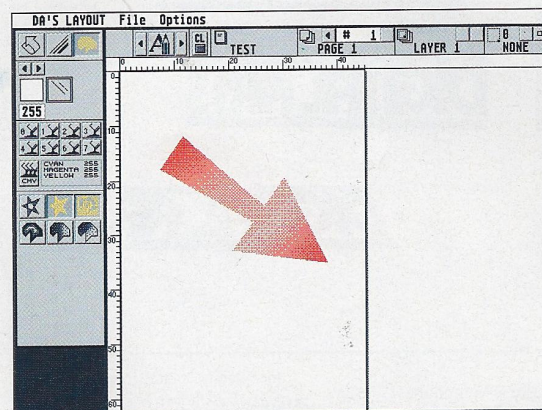
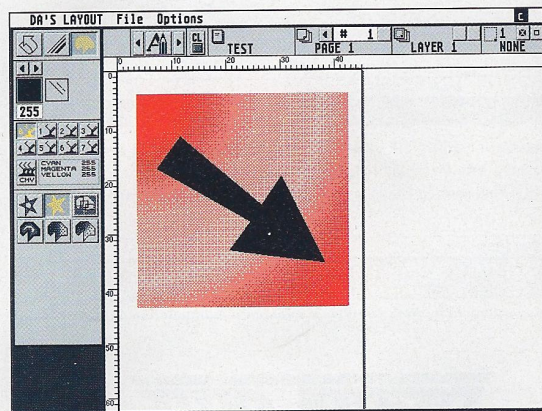
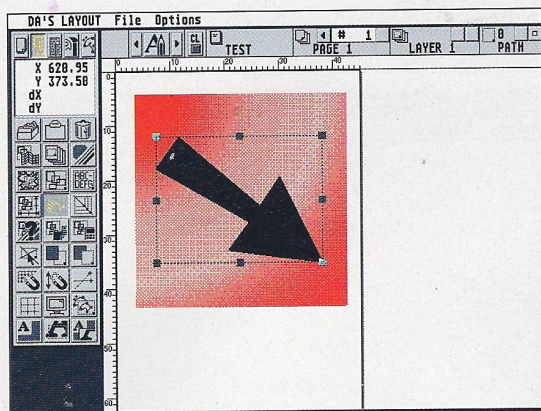
Not that DA's Layout is necessarily better than those two packages, no. But it's of comparable quality in most respects, it's incredibly fast for the now modest hardware platform I demonstrated it on - a 32MHz TT030 - and, most important of all, it is a truly original product that does

things in a way of its own, and some of these things far more easily and intuitively than even the most heavyweight mainstream setup.

Take vector graphics and fonts, for instance. No PC or Mac page layout package comes anywhere the power of DA's Layout's illustration capabilities. It's like having the two Aldus programs, PageMaker and FreeHand, rolled into one or Quark XPress with an Adobe Illustrator Xtension. Or Corel Draw incorporating Corel Ventura - all within the narrow memory confines of four megabytes (barely enough to run Windows on a PC these days) and at near-Pentium speeds. And as to fonts, it has its own vector font editor built in: DA's Layout started life as font editor under the name of Didot and will cope equally well with the Calamus format of the Atari world and the industry standard PostScript Type 1 format. Only a serious DTP practitioner can appreciate the sheer convenience of being able to tweak kerning pairs and design special characters on the fly, while in the middle of work on the layout!



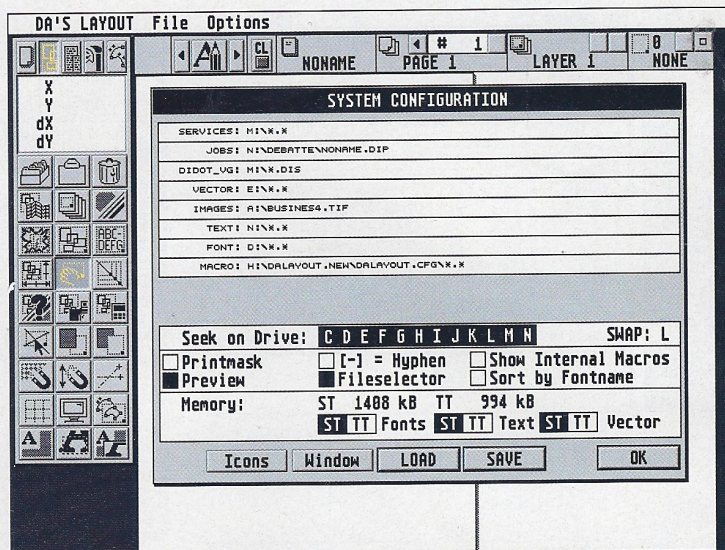
The new file selector includes a browser to view thumbnails of all graphics in a given directory. No frantic loading and deleting until the right picture has been found!



A simple example of the power of the Clipping Path module: To confine the visible portion of the red vector fill to the outline of the arrow, just group the two together, then dissolve the group temporarily with a double click, select the arrow path and click on the clipping path icon (to the right of the two "star" icons) in the toolbox). Close the group again and the new group object looks as in the third screenshot.

Culture shock

The mention of PostScript fonts leads straight to the important point that, unlike Calamus, DA's Layout does not lock the user into a world of its own but remains entirely compatible with the industry standard. Pages can be output as PostScript files to disk, for sending to an image-setting bureau, or directly to a PostScript printer, even a colour printer. The latest version under review will import and export Encapsulated PostScript (EPS) files to facilitate communication with PC and Mac programs. Calamus and



A number of new configuration options reflect the changes made to the program: selection of a swap drive to take the overflow from large files that can now contain bitmap pictures, automatic hyphen conversion, the new file selector, the more flexible internal macros, and the possibility of displaying style macros sorted by font name, among others.

PostScript fonts can be freely mixed and output to either a PostScript or any other device together.

For those used to other, frame-based DTP software, DA's Layout can be a bit of a culture shock initially. To start a new text column, for example, you expect to have to draw up an empty frame and then fill it with text. No empty frames here, though: the column and the text are inseparable - a new column, once its style and format capabilities are defined, will automatically be filled with default text. If you delete the text, the column object disappears. Text objects can flow over several pages or indeed be placed outside pages anywhere in the DA's Layout workspace, alongside other layout elements such as vector graphics, bitmapped pictures and indeed the pages themselves (which, unusually for a DTP program, can be of different sizes and proportions).

Fast, flexible and intuitive design of graphics-intensive documents such as brochures, flyers, leaflets and posters has always been the particular forte of the program. It is, however, perfectly possible to use it for magazine and book setting, provided you can live without such document management features as automatic page numbering and indexing.

Pricey

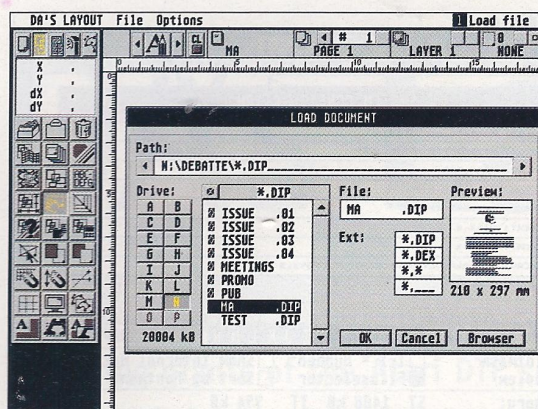
The new UK distributors of DA's Layout are those stalwarts of the British Atari scene, Systems Solutions. Supporting such a heavyweight package in a very limited market is no easy task, and it is not made easier by the hefty price tag of £599 for the basic program without the add-on modules. You would expect a decent manual for that, and indeed you get one, but it is in German and although

the software itself has been largely anglicised, its German origins tend to shine through in some untranslated dialogue boxes and menu items.

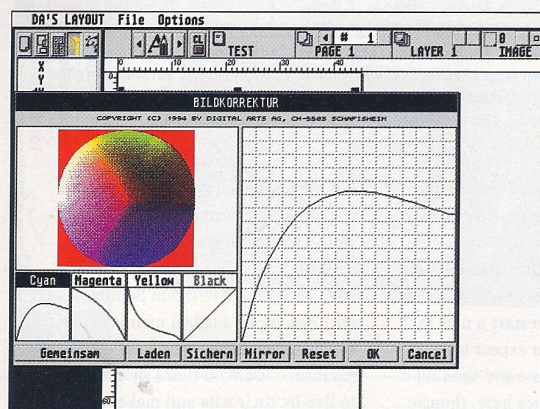
According to System Solutions boss Karl Brandt, an English manual will be supplied "sometime next year" but in the meantime users on these shores will have to live by their wits and make use of the telephone helpline offered. This is not a situation designed to win over new converts to DA's Layout, but if the alternative would be to leave established users without up-to-date versions of this slick and powerful program, it is just something we shall have to live with.

The importance of a continued supply of new software updates is borne out by the latest version submitted for review by System Solutions. While few of the new features and improvements break any real new ground, they all reflect the feedback from thousands of professional users over the years, and give it that feel of a mature, polished product which earlier versions were lacking in some departments.

The rather rigid adhesion to style and format macros has been relaxed, for instance, to allow the flexibility of local modifications to highlighted text selections. A new file selector gives graphical previews of page layouts and graphics to examine before you load the file and vector objects "hidden away" behind others can now be selected very comfortably through an interactive graphical display box. Incidental text items such as picture captions can be positioned on the page by a simple Shift-mouse click rather than going through the cumbersome "new text column" procedure.



The main attraction of the new file selector, apart from the browser button, is the Preview window which will display complete page layouts in miniature.



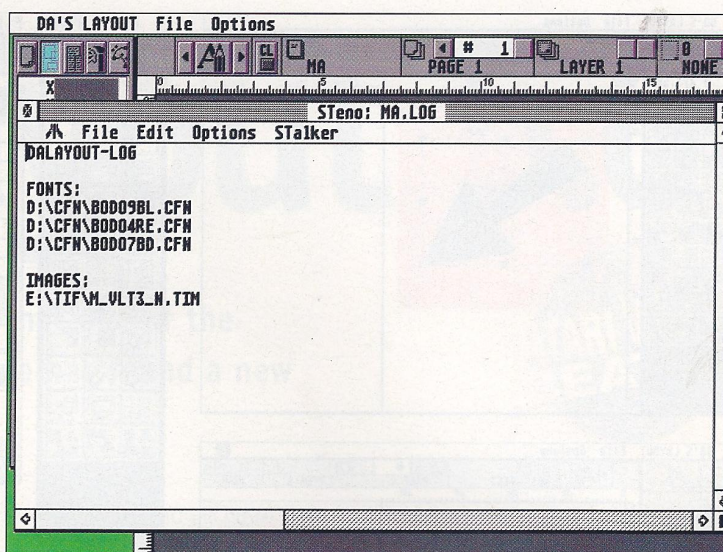
This new gradation curve correction window should not be confused with the printer output gradation, as it is only for quick correction to the tonal values of scanned bitmaps without having to switch to a full-blown image editor.

Colour and greyscale gradation curves can now be modified from within the program and guidelines and grids can now have user-defined colours. Also, pictures can now be saved with DEX and DIG output files, uncompressed TIFFs from just about any source are accepted, and layout items can now be deleted by a simple push of the Delete key rather than having to bother the trashcan icon - and much, much more.

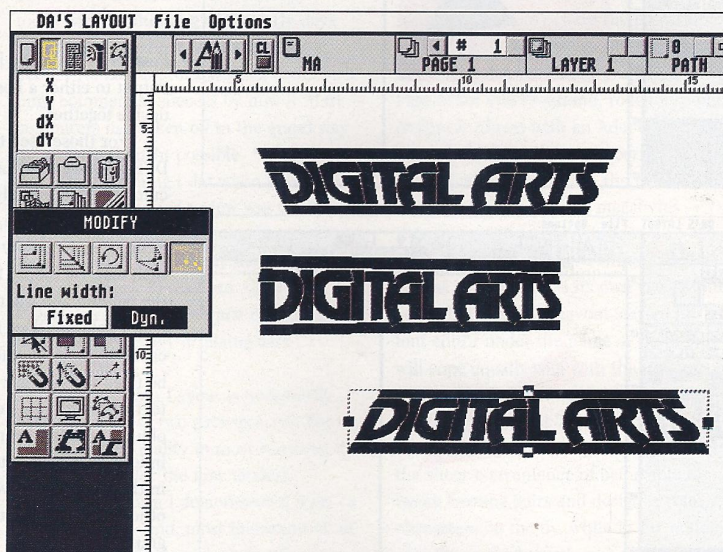
Given the dearth of Atari-specific image-setting bureaus (though System Solutions themselves offer this service), further concessions to the PostScript industry standard were obviously vital. The PostScript output drivers are much improved, supporting editable PPD device definition files and PostScript colour printing at long last.

Modular

The most exciting new additions on offer, though, are contained in additional plug-in modules. The Clipping Path extension lets you contain the visible part of a vector object within a freely definable clipping path, and repeat the operation to



A small but very significant addition: ordinary DIP output files sent to an imagesetting bureau need to have the fonts and images enclosed with them, and it is only too easy to suffer waste and delay because you forgot a crucial file! This new log file helps you keep track of all the bits and pieces.

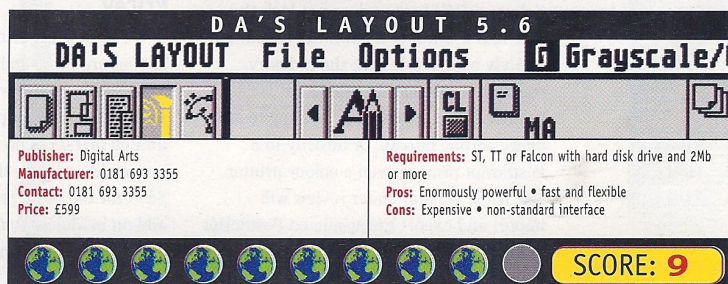


The "Modify Object" icon now features perspective distortion in either vertical or horizontal direction, by simply grabbing one of the control points with the mouse.

several levels' depth, and the EPS module supports the import and export of Encapsulated PostScript (EPS) files. At a cool £149 and \$249 respectively, though, these and other modules - the 3D Extruder, Compose, Calibrate and Archive - are strictly for the dedicated professional hoping to make some money out of all this, and not for the home enthusiast.

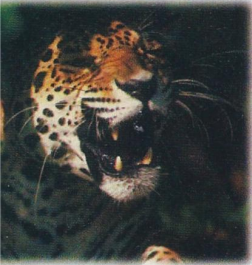
There is some hope for the paupers, though, in System Solutions intention to offer a basic monochrome and greyscale

version for a more affordable \$99 in the near future. That may not feature all the bells and whistles of its big brother, but should still be an attractive entry into what is easily the most powerful and versatile page design package to run on an Atari platform.



The Cat's Whiskers?

With the Sega Saturn and Sony Playstation now in high street shops, what kind of Christmas can Atari expect with the Jaguar? Iain Laskey takes a look.



Atari are hoping to win on price, indeed the Jaguar at £149 looks good compared to Sony's £299 and the Saturn's £399. When you add in the CD player at another £149, the Jaguar suddenly looks less impressive. New buyers would do well to check with Telegames (0116 288 0445) who are offering a Jaguar plus CD and 2 cartridge games for £245.

However, whereas the competition have several console selling titles, there are few, if any 'must-have' titles on the way that would make people buy Jaguars. Existing owners should look out for Highlander CD, Primal Rage CD, Battlemorph CD, Power Drive Rally and

Attack of the Mutant Penguins which are shaping up to be very promising releases.

Quite why it has taken Atari nearly 2 years to get thirty odd games out the door is anyone's guess. With the Jaguar being their main source of revenue, Atari cannot afford to keep this up. Its saviour may have arrived in the shape of Ted Hoff, an industry heavyweight formerly of Fox Interactive. Already he has shaken up Atari with several titles and peripherals going back to the drawing board after Hoff deemed them to be lacking in quality.

In addition, a raft of developers and designers has been recruited from Sega to help improve the software situation. It is depressing though to find so many third party developers who are unable to get

prototypes of forthcoming add-ons to allow them to write and test code to support them. (It could explain why they've only got 30 games out - Ed).

It's a sad fact though that the majority of forthcoming Jaguar titles are like uprated 16-bit titles and can't hold a candle to the current crop of Saturn and PSX games. Jaguar games often play well though and perhaps the small but vocal group of people who are complaining that the PSX is all eye-candy and no gameplay, may be onto something. With the success of retro products like Microsoft's Arcade, perhaps the market is ready for a return to real gameplay. And when it comes to nostalgia, they don't come with a longer game pedigree than Atari.

Flashback

Will Flashback be just a flash in the pan for the Jaguar?
Iain Laskey regains his memory and reports back.

Flashback is US Gold's first Jaguar release. Unfortunately they have decided to debut with a title that has been and gone on just about every other platform. With the game now a budget title for many other systems, is it worth the full price on Jaguar?

Flashback is a kind of graphic adventure albeit a fairly simple one. You have seven levels of running, jumping, shooting and general exploring to do as you attempt to get your memory returned. I found the gameplay to be intensely frustrating. A lot of tasks boil down to precise timing for a leap or shot at an enemy and if you get it wrong you have to start again from the last save point.

You cannot save the game at any place other than the pre-designated save points and these are far too few. Flashback does have a curiously addictive quality though. I found myself tearing out my hair in annoyance but still trying again and again to complete each stage.

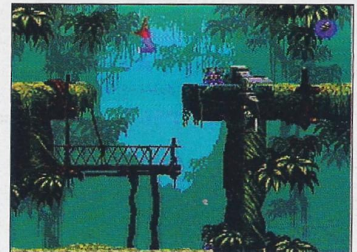
The graphics wouldn't look out of place on a SNES and US Gold could've done a lot more to improve them. One of the game's original selling points was its

use of rotoscoped graphics and these do work well with some very realistic animation of the main characters. However, the overall look is less than stunning. To be fair, they have packed the cartridge with lots of very different looking levels. At fixed points you also get movie sequences to help tell the story as it unfolds.

If you like this kind of game then I'd recommend trying it before you buy. It's not terrible but then it's not particularly good either. Far too many Jaguar developers are taking the easy route when porting games and the console deserves and can do much better than this.



Cinematic cut-sequences add atmosphere to the game.



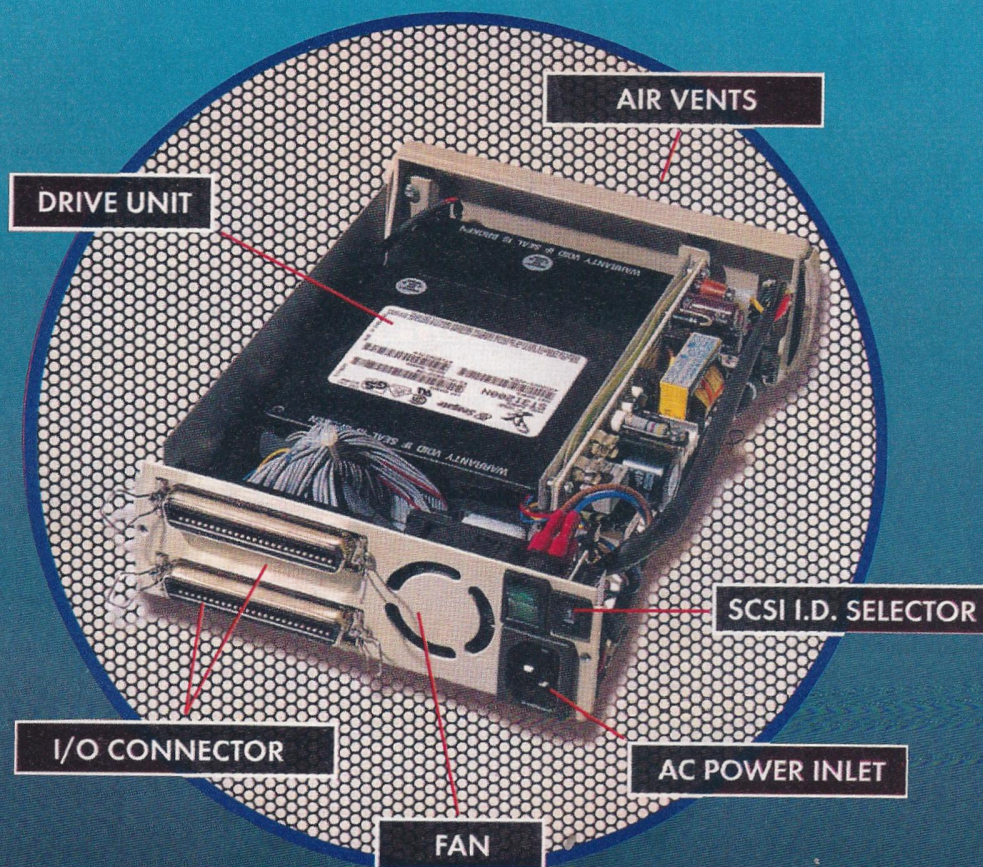
Conrad's acrobatic antics make captivating viewing.



These guys are really tough - they morph when you try to shoot them!

FLASHBACK	
Publisher: US Gold Contact: 0121 606 1800 Price: £39.99	Requirements: Jaguar Pros: Lots to do addictive quality Cons: Basic graphics frustrating gameplay poor saves
SCORE: 5	

Ladbroke Computing

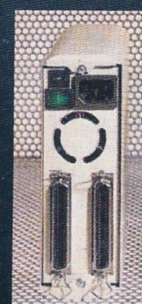
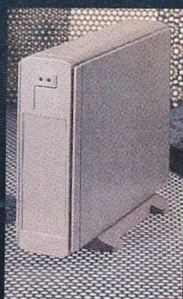


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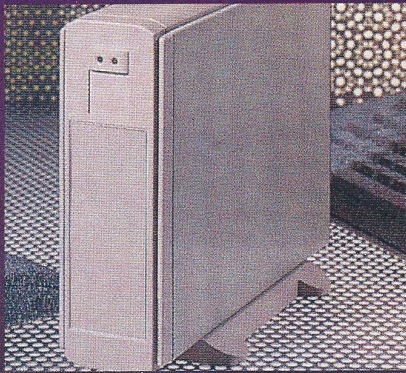
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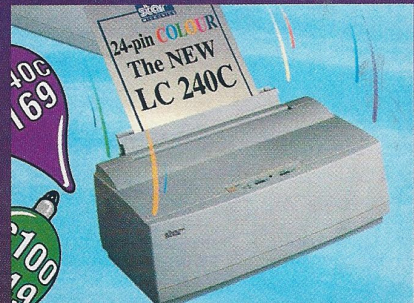


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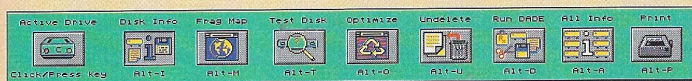
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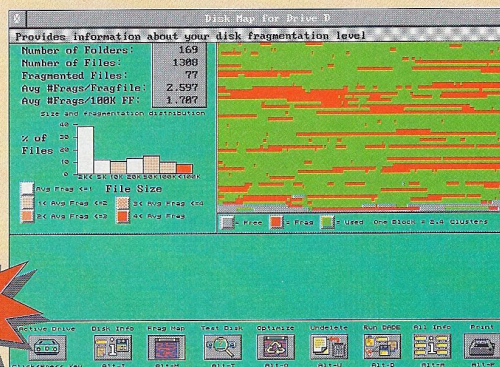
Diamond Edge 2 Ships!



Finally, the wait is over. The biggest upgrade to the best disk utility program ever is complete and is shipping *now*! Over two years of programming have gone into this Diamond Edge upgrade that *no* Atari owner should be without.

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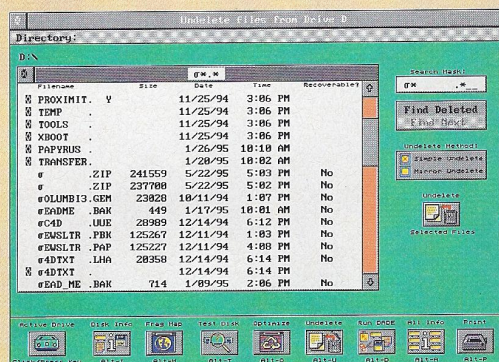


The Disk Fragmentation Map plus Statistics

Diamond Edge, the most popular and powerful hard disk management tool package for the Atari has undergone its first major overhaul in 2 years. New features include a streamlined, re-designed user interface, many new and enhanced functions, internal speed optimisations, plus new programs like Diamond Mirror 2 and Diamond Advanced Disk Editor (DADE).

Re-designed from the ground up with the user in mind, Diamond Edge 2 is the most advanced, easiest-to-use disk management system available for TOS computers. It is fully compatible with all Atari computers and disks, disk formats, TOS versions, and alternative operating systems like Multi-TOS, Geneva, and MagIX.

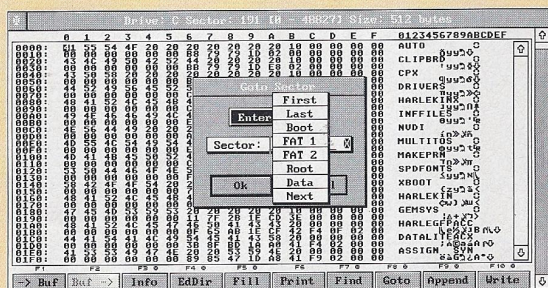
Protect yourself from data loss with Diamond Edge 2 at a great, value-for-money price; comparable software on other platforms costs over £100. Diamond Edge 2 is economical insurance against disk problems and data loss. You simply cannot afford to be without it! Upgrades include a completely re-written and expanded manual.



Diamond Edge 2; un-deleting files is a piece of cake

There are two types of computer users; those who have lost data and those that *will* lose data. Diamond Edge 2 creates a third ruling class: those that are protected from data loss! Your data is too valuable to be without the protection of Diamond Edge 2.

Diamond Advanced Disk Editor

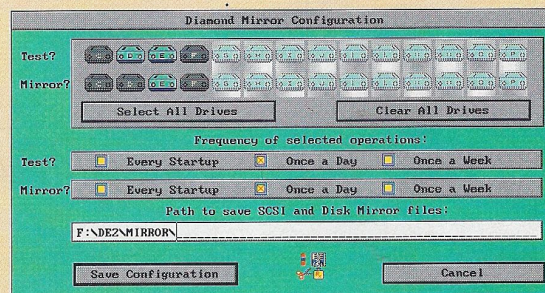


DADE - the powerful disk editor included in Diamond Edge 2

There are other disk editors, but none as powerful, flexible, and easy to use as DADE. Specifically designed with time-saving and impressive features to aid any editing or recovery effort, there is *no* other disk management system that offers as much, including Physical Device Level Disk Editing. The ultimate in data recovery and low level power tools.

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- Easy to use edit window with Offsets, Hex, and ASCII displays.
- Convenient function button bar. Many with special time saving features when double-clicked.
- Easy-to-use Directory Edit window decodes the information for you with a trace feature for FAT entries for a file. Very nice!
- Flexible Fill function.
- Powerful search and replace function.
- Rebuild lost files sector by sector.

Diamond Mirror 2



The Diamond Mirror Configuration dialog

Diamond Mirror 2 (use regularly to 'snapshot' your drive) has been greatly enhanced to include complete testing of disks at boot time as well as keeping backup copies of Mirror Files.

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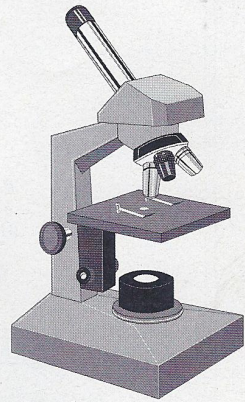
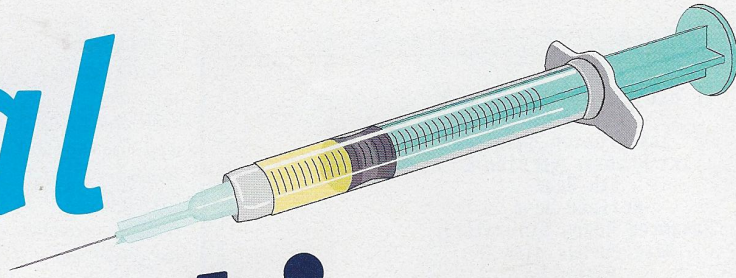
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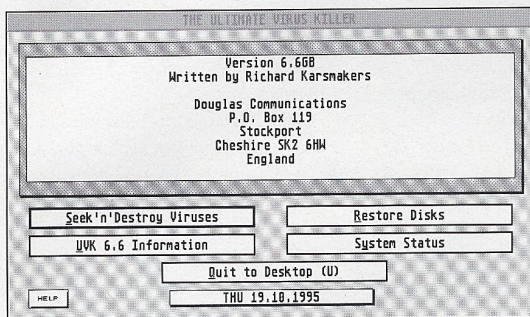
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Viral Infections



What's all this fuss about computer viruses?

Steve Delaney wipes the cobwebs off his microscope and takes a closer look.



The 3D interface is a definite plus on the Falcon.



Computer viruses are probably the single most misunderstood subject in the field of computing, especially on Atari computers. I have been interested in them since 1988, carrying out countless experiments with "live specimens" in connection with a virus killer my company used to sell. I am happy to say that, apart from viruses sent to me for research purposes, I have never come across a link virus and have only ever encountered five distinct bootsector viruses.

Everyone who uses a computer is susceptible to computer viruses. It is therefore safe to assume that around 90% of you will already have encountered at least one virus, knowingly or unknowingly. The Ghost virus is undoubtedly the most common of these. Computer viruses come in two strains, bootsector and link.

A bootsector virus resides on track 0 (the boot sector) of a floppy disk, hence its name. It is loaded into memory when an infected disk is read and copies itself onto any floppy disk accessed during the current session. Some can survive a reset but none can remain active after powering down for 30 seconds or more.

Most bootsector viruses are harmless, though annoying, but there are a handful which can destroy data. For this reason, you should always check newly received

disks before letting them loose on your system.

Link viruses are nasty creatures. They attach (or link) themselves to executable files, often hiding themselves in such a way as to be 'invisible' to the user. An infected program runs as normal, the virus copies itself into memory, then attaches itself to all executable files accessed during that session. The virus waits for a certain event to trigger it, then strikes when you are least expecting it to, usually destroying all your data.

The Ultimate Virus Killer Book

Nobody understands computer viruses better than Richard Karsmakers, author of the Ultimate Virus Killer. In an attempt to enlighten the rest of us, he has condensed eight years' accumulated knowledge of the subject, into a 198 page publication, called The Ultimate Virus Killer Book.

The book has three distinct sections, The UVK Book, The UVK Manual and The UVK Book Appendices. The first section runs to 74 pages and is ideally suited to the novice user or someone who just wants to broaden their knowledge about computer viruses. It explains how the different types of virus work and how to protect your collection against all types of viruses.

As well as viruses on the ST, the author takes a look at the existence of these 'germs' on other computer systems. The UVK Book is a real eye-opener, taking you

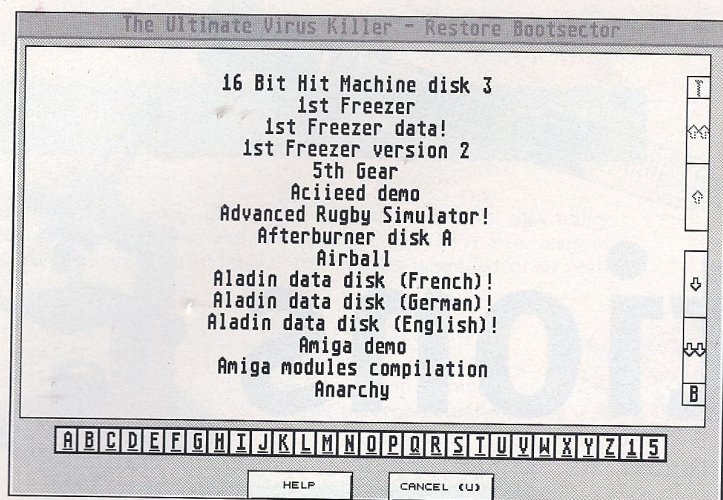
through the development of the UVK software over the years, including the author's professional, yet unconventional, relationship with a virus programmer. It also takes an in-depth look at the latest viruses which exist on non-executable bootsectors and some real nasty ones which encrypt themselves.

The second part of the publication is the full user manual to the Ultimate Virus Killer v6.5. This is a welcome inclusion as it addresses the only major criticism of UVK over the years, namely its lack of printed documentation.

The third section consists of thirteen appendices, followed by the credits. The first is by far the largest, giving a thorough analysis of all known viruses and their symptoms. The others cover such things as system variables commonly hooked into by viruses, a trouble-shooting section, other virus killer programs, an extensive glossary and a collection of commonly asked questions.

The author takes particular care not to go 'over your head' in what is undoubtedly a very technically involved subject matter. Everything is explained clearly and concisely and the publication can at no time be described as either 'heavy going' or needless waffle. The only thing which really lets it down is the variable print where poor quality duplication has resulted in some sections of the book being lighter (and therefore harder to read) than others.

THE ULTIMATE VIRUS KILLER BOOK	
UVK Extensive System Check	
Publisher: Douglas Communications, PO Box 119, Stockport, Cheshire, SK2 6HW. Contact: 01625 850270 Price: £14.95 Pros: Authoritative • easy to read • superb glossary • UVK manual Cons: Poor duplication quality	
SCORE: 7	



UVK can repair 747 different types of damaged bootsectors.

The Ultimate Virus Killer v6.6

Following hot on the heels of the Ultimate Virus Killer Book is the latest revision (v6.6) of the software itself. UVK has already been reviewed so many times in its previous incarnations that most of you are already familiar with the product. For those of you who are new to the Atari, here's a quick recap.

The Ultimate Virus Killer is the only commercially available virus killer for Atari computers in the English speaking world. It has evolved over the years into an essential tool for protecting your valuable data from infection by all known computer viruses. In addition, it has an extensive library of almost 1,600 bootsectors, ensuring that your favourite commercial game or PD demo bootsector is recognised for what it is, rather than being mistaken for a virus and overwritten. Similarly, it knows about



most memory resident programs, rather than confusing them with a possible virus in memory.

UVK is updated regularly, currently recognising and destroying 93 different types of bootsector viruses. It also alerts you to any suspicious bootsectors, advising of the probability of them containing viruses. In addition, UVK can restore 747

game and demo bootsectors to disks which have already been damaged as a result of virus attack. Executable files can be scanned for the five known link viruses and both bootsectors and executable files can be 'immunised' (not effective against all viruses) against further attack.

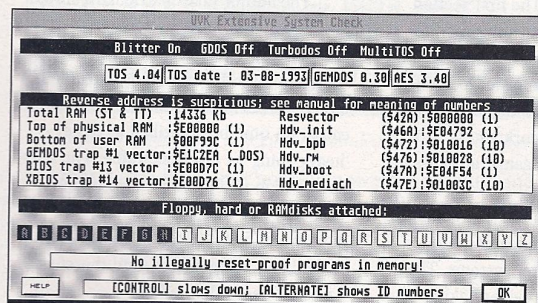
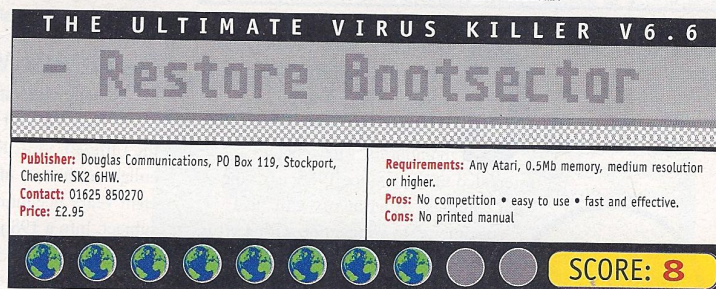
Looking to UVK v6.6, there is no doubt that the emergence of new viruses is definitely slowing down and that the biggest changes relate to the appearance and functionality of the package, rather than a massive increase in its recognition statistics.

It is comforting to know that no new link viruses have been discovered in six years and only four new bootsector bugs have been discovered this year. Having said that, the newer ones are more dangerous and encountering just one of these four could be a very costly experience.

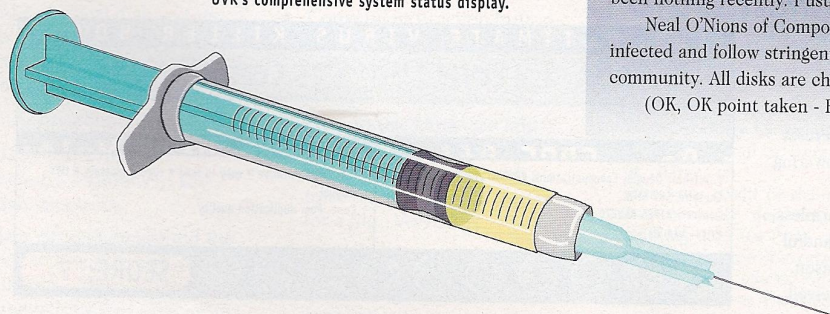
I have used many versions of UVK over the years, and the first thing I noticed was the new interface. It was actually introduced a few versions back, but as this is UVK's first review in *Atari World*, I feel it still warrants a mention. Everything is now in GEM windows (making it fully Multi-TOS compatible) and on TOS v4.02 upwards, you get a smart 3D appearance. Even on the ST, the interface is much more attractive.

Less cosmetic but equally noticeable is the program's increased speed of operation. Both the initial system check and the checking of files for link viruses, are several times faster than before, even on floppies.

The Ultimate Virus Killer must be one of the longest supported applications on the Atari platform, as well as being the most frequently upgraded. This latest upgrade has resulted in a highly polished product, both functionally and aesthetically. What more can possibly go into the next version?



UVK's comprehensive system status display.



Just how common are they?

When discussing this article with *Atari World's* esteemed editor, he said, "I've only ever had one. I wonder if this Richard Karsmakers bloke is making it all up?" This did lead to the obvious question. Just how common are they?

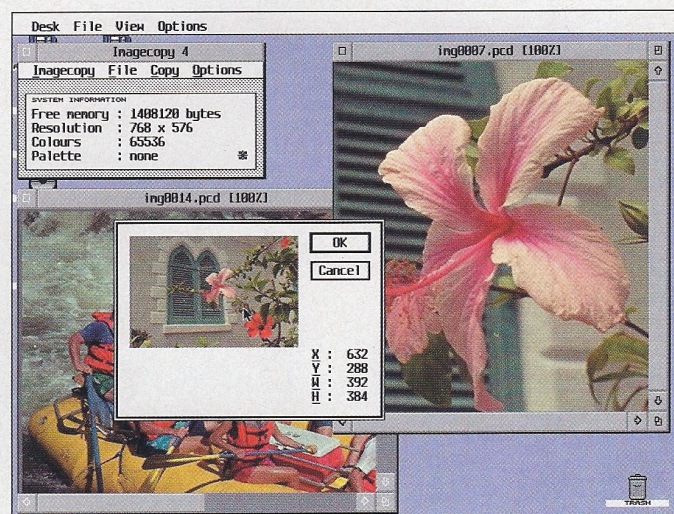
David Link, of HiSoft, said: "We have encountered very few viruses as a company. It is not as easy to get one on the Atari as you have to boot from an infected disk. We don't actually use a virus killer as we never boot Ataris from floppy".

Danny Bhabuta of Hensa: "I came across quite a few when I first started out with the ST. Apart from encountering the Ghost virus a few months ago, there has been nothing recently. I usually check disks with Feopy 3's virus check function."

Neal O'Nions of Compo: "We find about one in ten disks from end users are infected and follow stringent procedures due to the huge problem in the end user community. All disks are checked with UVK".

(OK, OK point taken - Ed)

Have your **Pictures** just how you want them



If you want to capture, view, convert, or print images on your Atari computer then you need Imagecopy. All major image file formats are supported, and images can be printed in monochrome or colour on all popular printers: 9-pin dot matrix to 720-dpi inkjet printers.

Two of the major new features in version 4 of Imagecopy are Page Layout and *Catalogue*.

The Page Layout facility allows multiple images to be arranged on a page using the mouse or by typing coordinates. Individual images can have their own colour settings, and can be freely moved and resized (as in a publishing program). This option can also be used to do colour DTP work by overprinting output from a monochrome publishing program, or you can use text images from Textstyle to create greetings cards or posters.

The interactive screen *Catalogue* feature displays thumbnail miniatures of images which can be clicked on to view, print, or convert the original images.

For an exhaustive list of the features in Imagecopy 4 - and for details on other versions of Imagecopy - just phone our 24-hour catalogue line on 0115-945-5250 and ask for a copy of our 24-page Product Catalogue, or if you prefer you can mail us your name and address.

Prices

Imagecopy 4: £34.95
Imagecopy 4CD: £39.95

Upgrades

From Imagecopy 3.5: £ 6.95
From Imagecopy 3.5: £ 7.95
From Imagecopy 3.5: £17.95
From Imagecopy 3.5: £22.95
From Imagecopy 3.5: £24.95

For upgrades please return disk 1, plus CD disk if applicable. Textstyle is supplied free with Imagecopy 4; add £5 to receive a copy of Textstyle with an Imagecopy 4 upgrade. Add £5 to the upgrade price if you want to upgrade to Imagecopy 4CD from a version of Imagecopy other than 3.5CD.

FaST Club

For users of Atari ST & Falcon computers

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Imagecopy 4

The ultimate Image utility for Atari computers

Substation Guide *Part 2*

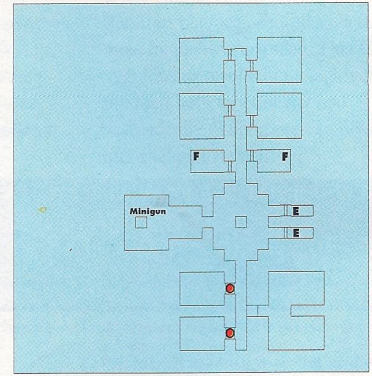
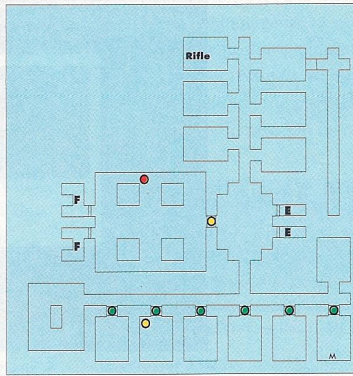
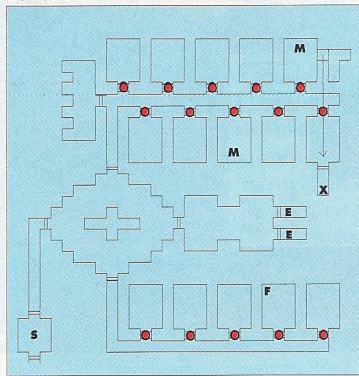
In the final part of the guide Graeme Rutt takes you into the depths of the Substation

STEHN-DAH-TEASE! Well done Marines, you've come through the first part of our simulation with flying colours. Your fellow recruits who didn't make it are now on the

shuttle back home - where they'll be put into work more suited to their delicate dispositions. You hard so-and-so's are officially the creme-de-la-creme, the select few, the bravest of the brave, the top guns,

the cliché of the cliché. But it ain't all gravy from here on in, get your kit together, roust your lazy butts and enter the final part of the SubStation. I would wish you luck, but I know you don't need it.

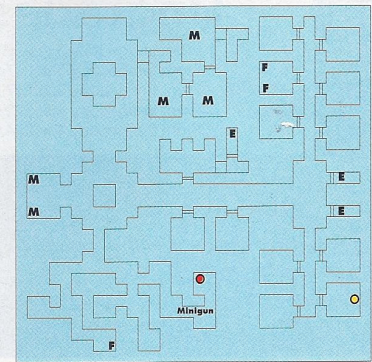
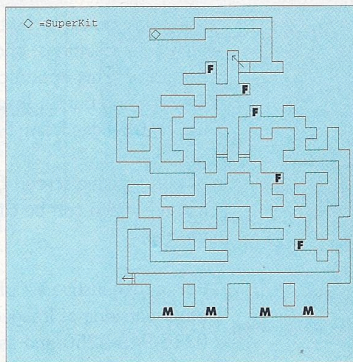
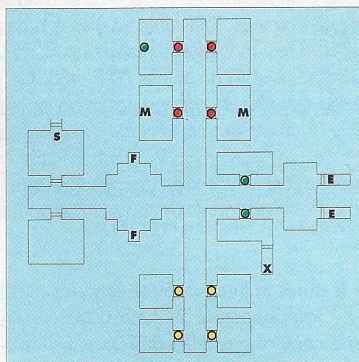
Level 7



Edo

A SubLevel full of small rooms, normally navigated by chance - use your simulation map to find the correct sequence of keys. Once you've acquired the yellow key, get to SubLevel 3 to pick up the Minigun. There's not many Medikits or Food available on this level so make sure you're healthy when you enter.

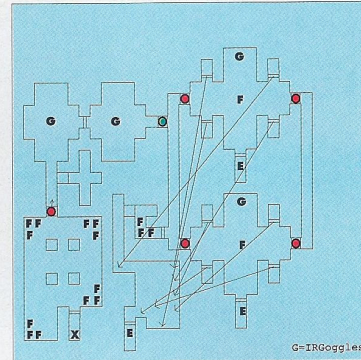
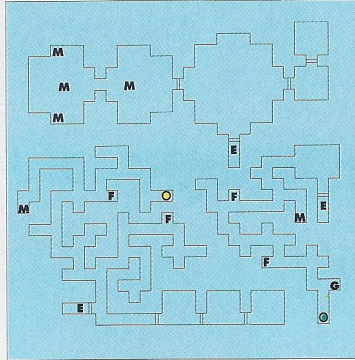
Level 8



Meiji

First get to SubLevel 3 and find the red and yellow keys. If you're still in good shape after that, find the bathroom at the center of the SubLevel and move to SubLevel 2 using the hidden elevator. At SubLevel 2 you should be able to locate a SuperKit, giving you 200% health. Beware of the maze on SubLevel 2, getting stuck down a blind alley could be fatal.

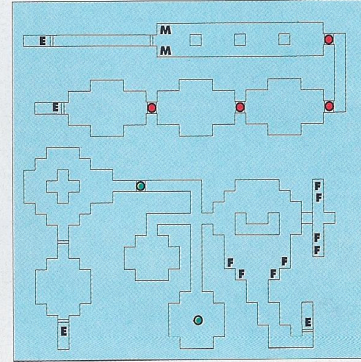
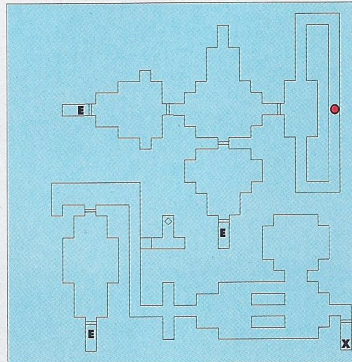
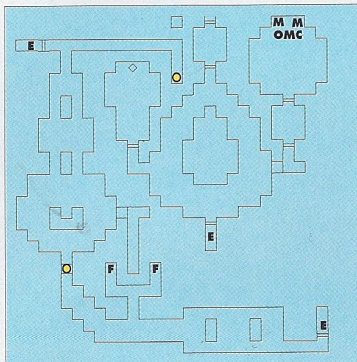
Level 9



Taisho

Due to a power failure this mission is carried out in semi-darkness. Your first priority should be obtaining IR-goggles, there are plenty available. Watch out for a large attack from several types of monsters at the very beginning of the mission. Once you've found the green key, get back to the start of the level and collect the One Mighty Cannon (OMC) 9001. At the end of SubLevel 3 you'll find an especially nasty monster, best disposed of by sneaking up on him and taking him out with a mine.

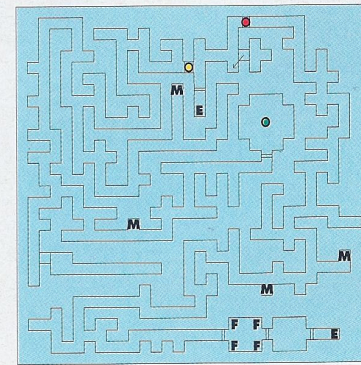
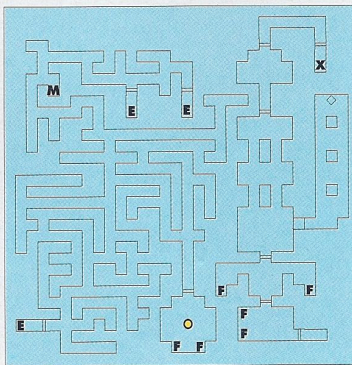
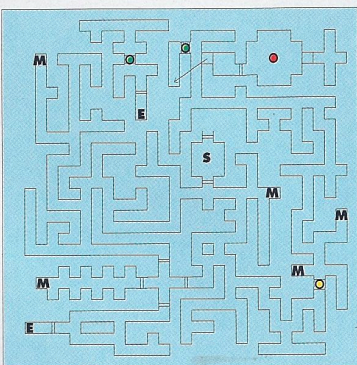
Level 10



Showa

Check out the map, looks easy, huh? No mazes, easy keys, wide open spaces. You should be able to finish it off in seconds. 'Fraid not. This SubLevel has attracted a vast array of enemy creatures - all with one purpose in mind, and it ain't crochet. Food and Medikits can be found on SubLevel 3, if you get that far. You may find that the SuperKit on SubLevel 2 is your only salvation. Have fun!

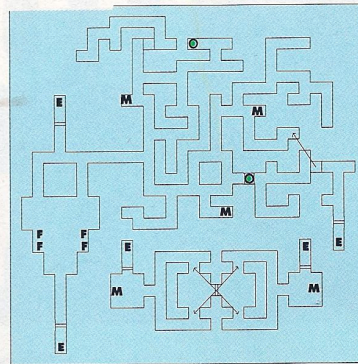
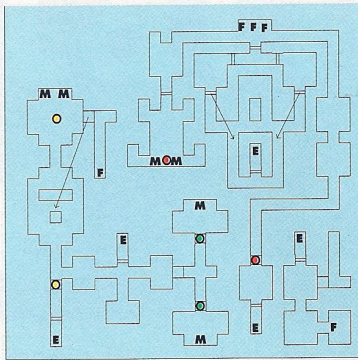
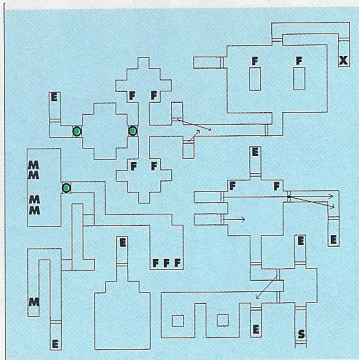
Level 11



Kensho

What's that smell when you look at the map, private? Shall I tell you? It's the smell of fear. This level is one of the hardest there is, not only because of its labyrinthine nature, but also because it's filled to the brim with enemies and there's hardly time enough to explore ALL secret spaces. Use your map diligently and be oh-so-careful when you turn those corners.

Level 12

**ULV (Unidentified Lifeform Vessel) site**

You made it this far? You're a hero. If you finish it, you'll be that rarest of men - a live hero. This is the last level of the simulation. The culmination of everything you've learnt. Watch out for some nasty booby-traps on SubLevel 2, watch out for hidden monsters and kill anything that moves. If you make it past the final monster alive I'll buy you an ice cold one in the mess. If you don't, well, we'll give you a good send off.

Weapons

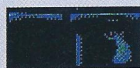
Marine, let me tell you a secret - for this mission you can forget the manual definitions for your weapons inventory. They mean nothing against the creatures you're up against. Here's my own personal guide to the weapons in the simulation.

Knife**Damage: 4 Hit Points**

The knife is the most paltry of weapons, which is why it's standard issue. If you have to go up against a Neptar armed only with this you may as well forget about life. Dump it ASAP and get something with a little more killing velocity.

Handgun**Damage: 3 Hit Points**

Second only to the knife in terms of worthlessness. Killing things with this 'weapon' is as boring as it is ineffective. I wouldn't use this to kill my grandmother - should the diminutive grey-haired octagenerian turn out to be a damn commie. Dump it.

**Subgun****Damage: 2 Hit Points**

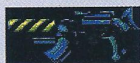
Ah-ha, now we're getting somewhere. Something that shoots bullets - fast. The subgun is the standard issue for high-class combat marines - which you ain't. You should be able to arm yourself with one of these early on in the simulation.

**Rifle****Damage: 10 Hit Points**

Not as fast as the subgun but very effective. This is a weapon I used to kill my grandfather - who did turn out to be a damn commie, I think. Look, I'm American, God told me to do it, okay?

**Minigun****Damage: 4 Hit Points**

'Size isn't everything', I agree with that, except when it comes to guns. This is a very big gun. It's big, it's fast and it makes you look very hard. This is standard issue for me, you'll have to find your own.

**OMC 9001****Damage: 20 Hit Points**

As the name implies, this is One Mighty Cannon. You can see from the manual that it ain't meant to be used on live targets. I ask myself who writes these things? What other kind of target is there? Highly recommended.

H2S04 Mine**Damage: Unknown**

Highly lethal in the right hands, these mines detonate 3 seconds after being dropped and erase everything in a 15 metre area. Useful against high-powered enemies - but try not to blow yourself up.

Map key

- S = Start
- X = Exit
- E = Elevator
- M = Medikit
- F = Food
- G = Goggles
- = Red Key
- = Yellow Key
- = Green Key
- = Red Door
- = Yellow Door
- = Green Door

COMPETITION WINNERS**Competition winners**

Prize copies of Substation are on their way to: Mrs L Thompson of Chester-le-Street, Co Durham, P Walsh of Alloa, Scotland, E Booth of Cheshire, B Smith of Dublin and P Ashman of Burnham-on-Crouch, Essex. Looks like we spread them around geographically, doesn't it? Not so - it was first out of the hat, honest! Anyway, you lucky winners get in there and kick some ass, you hear? Even you, Mrs Thompson.

The Big Picture

Andrew Wright announces the results of the big pic compo...



1st Prize

Thank you all for providing me with many hours' work sifting through your pictures! The standard of entries was amazing but what was perhaps most interesting was that most of you actually used two platforms, either an Atari and a PC or an Atari and a Mac, to get the end result.

First prize

First prize is this entry from Steve Attwood of Warley in the West Midlands. The picture is a surreal raytraced image created using POV on a 4Mb STFM of eight year vintage. Steve ported the POV files to the PC for rendering at VGA resolution because the output Targa files were pretty enormous. Once rendered, the images were converted to JPEG format and saved on a 720K disk.

His winning entry, called *Fire in the Sky*, was the result of experimentation with colour maps, making a smooth transition between one colour and another, though he admits the result was pure chance. The spiked orb is a sphere constructed in CyberSculpt, covered in pyramids and

coated with a brass bump map texture. The image took a total of 68 hours to render at 320 by 200 resolution with anti-aliasing set to 0.3 in order to smooth out the jaggies. Again it shows how two platforms can co-operate - and the image speaks for itself.

Steve's entry wins him an A0 print, roughly four feet by three feet in size, courtesy of JCA Europe and its new large format colour inkjet printing system.

Second prize

This entry has some superb detail on it. David Stephenson explains how he did it. "The basic image was created using the Bryce raytracer on the Mac as I didn't want to tie up my main machine, an STe, which would have taken a week or more to render the image using POV. It still took four days on the Mac and even then I decided I didn't like the sky colour. I couldn't afford the time to redo the whole image, so I just regenerated the sky and the most obvious object that reflected the sky (the pyramid).

"The PICT files were converted to TGA using GraphicsConverter (on the Mac), then to TIFF using GEM-View under MagicMac. Two steps were necessary as DA's Picture did not like the TIFF files generated by GraphicsConverter, and GEM-View does not understand PICT

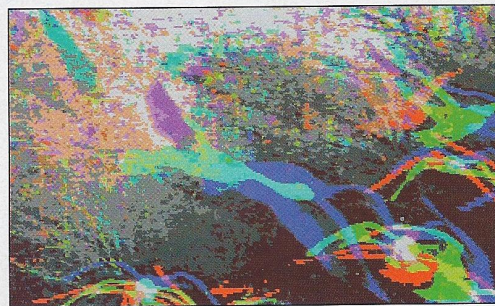


2nd Prize

files.

"Once in TIFF format, they were loaded into DA's Picture, and the top part of the image with the new sky colours was patched onto the full image. Once satisfied with this, I loaded DA's Vector to draw some 3D text (for the copyright message) and this was also place onto the image using DA's Picture. The final TIFF file was converted to JPEG using Imagecopy."

David Stephenson's entry wins him an A1 print - enjoy!



3rd Prize

Third prize

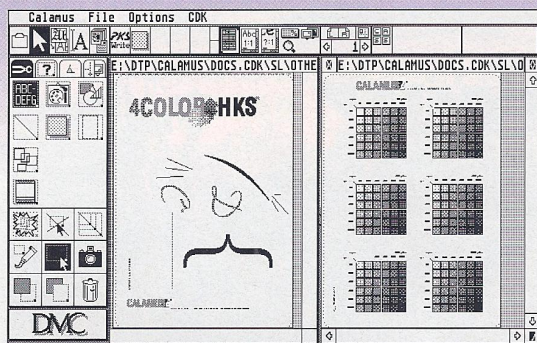
David Anthony of Benfleet in Essex has won third prize with a remarkable image created using HiSoft's VideoMaster. Originating on Video 8, the frame was grabbed using VideoMaster's auto mode while the video was still playing. Although the result is only a 320 by 200 resolution image it is remarkably attractive.

Nice one David - you can look forward to your A1 poster from JCA pretty soon.

Competition

Calamus

Ben Hall takes a look at that all time classic of Atari programs...



SL can produce colour separations even on mono systems.

Calamus has gained near legendary status in the Atari community. It was one of the first programs to prove that the Atari could compete with - and in many ways outdo - the other industry standard machines. It gave Atari users a really professional piece of software. It gave us a flagship product.

Calamus was developed in Germany by software house DMC, and was first shown to an enthusiastic public in 1987. It quickly gained a strong following amongst Atari users, especially in Germany, where, for a while, it was even packaged free with all new Mega STs. It was a ground-breaking program in many ways, and showed the way forward for all desk top publishing systems of the future.

WYSI-What?

Until Calamus came along, all traditional computer-based publishing systems could only produce an approximation of their printed output on screen, which made designing documents much more of a hit-and-miss affair. It was usually necessary to do quite a few printouts to see what the end result was going to be, partly due to the standard monitor resolution of computers at the time, but the real culprits were the fonts.

All of the fonts used were bitmaps, which is basically a collection of pictures for each character in each font. The nature of bitmapped fonts requires a different set of character graphics for each resolution that they are going to be used

for - basically, you would need two separate font files, one for the screen and one for the much higher resolution of the printer. Differences in these fonts meant that what you saw on the screen was only a rough representation of the printed version. In the worst case, bitmap screen fonts would be used on the computer, only to be substituted by the completely separate vector fonts stored within the printer for the printout. Although not too much of a problem for the home user, this was a real headache for people who needed to produce accurate documents on high resolution systems.

Calamus solved these problems by being the first program to use vector-based fonts both on screen and also for the printer, which could be easily and accurately scaled to work in any resolution - and you only needed one font file. With Calamus you could zoom into the page and examine it at the resolution of the printer, and see exactly, pixel by pixel, what the printed version would look like. This precise relationship between the document as it appears on screen and the printed version came to be known as WYSIWYG, for What-You-See-Is-What-You-Get. Coupled with the clarity of the Atari mono monitor, this made Calamus the ideal system for desk top publishing.

Calamus is fast. Compared to other systems of the day, and despite the complicated technology behind the outline font scaling mechanism, Calamus simply flew along. Pages would come out of the printer in about half the time of the other ST DTP systems.

Another contributory factor in the speed stakes was the widescale use of Atari's own laser printers, which unlike conventional laser printers, had no memory of their own, and relied purely upon using the ST's memory for printouts. The ST's superior processor power and the speed of

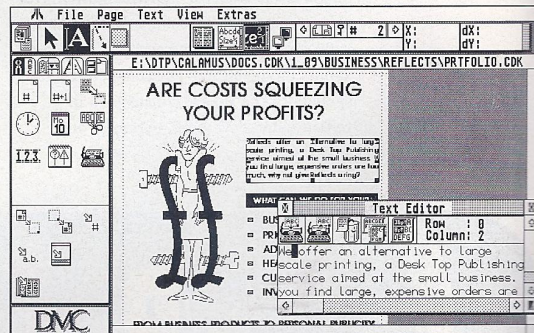
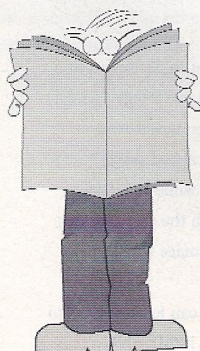
the direct memory addressing (DMA) data transfers meant that you got your printouts a lot quicker than squirting them down a normal printer cable. Of course, it was always possible to use standard laser printers as well, they just weren't as fast as the Atari ones.

What a RIP-off!

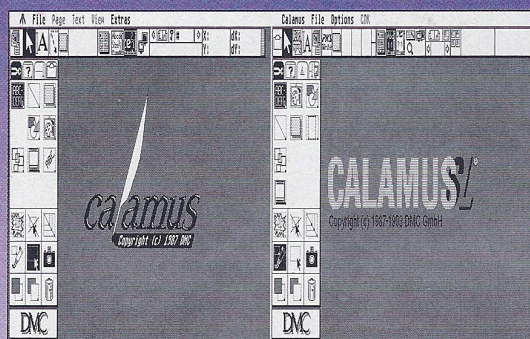
The other main Calamus innovation was in the use of its own 'soft-RIP' technology, which generates the actual image of the page being printed pixel by pixel. This process, Raster Image Processing, was previously (and still is, on conventional systems) done in the printer or imagesetter, with the most common system these days being Postscript. Calamus does the whole of this process internally, generating the appropriate bitmap of the page and sending it to the printer.

DMC have always argued, with some justification, that Calamus' soft-RIP system was superior to Postscript, but their constant dedication to completely ignoring the Postscript standard was a major annoyance to users trying to get their work printed at commercial bureaux. Germany, having a higher proportion of Atari users and a big love of Calamus, had less of a problem because there were far more Calamus bureaux.

The Calamus interface takes a lot of getting used to. The phrase 'icon shock' comes to mind, as most of Calamus'



Calamus included a built-in text editor for making those essential last minute changes!



Calamus SL bears a striking resemblance to its predecessor, but is a much more powerful program.

functions are controlled by a myriad of icons. Learning what each does takes a while, but it really does start to become second nature and it is possible to work quite fast. In addition, there are definable key commands for most functions, and usefully, when you drift the mouse pointer over any icon, a short description appears in the top right of the screen telling you what it does, together with a reference to the manual - which, incidentally, is rather good, with both tutorial and reference sections, and a small amount of technical information.

Diversions

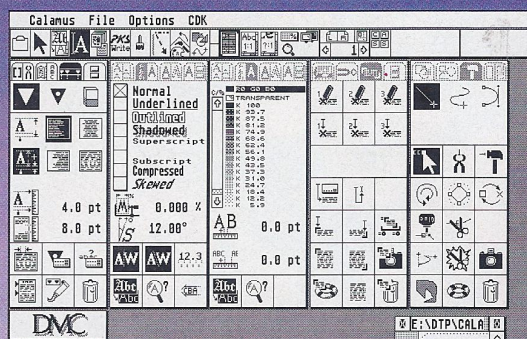
Initial versions of the program were renowned for crashing regularly and quite spectacularly. By the time Calamus had reached its final 1.09n version though it was very stable. However, there were criticisms levelled at the program, centering around the restricted typographic control, lack of a good range

of import formats, and no colour support.

By this time, desktop publishing systems on other machines had been starting to catch up and overtake Calamus, incorporating many of Calamus' unique features (whether by

accident or design). We needed more power. However, much talk of a new, hugely improved version of Calamus had been drifting around in Atari circles - everyone was waiting for Calamus SL, the completely rewritten, modular and (ta daa!) full-colour program with vastly improved features. We waited and we waited. When it finally came to light, there were again many stability problems like its predecessor, which fortunately are now mostly forgotten.

Calamus SL is a beast of a program (in a good way!), and pretty much capable of anything you want to throw at it. It can handle full-colour professional applications with ease, has loads of import (and export) drivers, and has a range of add-on modules for many different applications. These include Speedline, a bitmap auto-tracing module, a full vector graphics module, all of the standard page/text/graphics modules, and the PKS Write text editor. Various other modules can be purchased separately, including the Bridge module to finally let Calamus talk PostScript, and a range of image processing modules by a separate company, Adequate Systems.



Calamus SL is a modular system giving a vast array of functions.

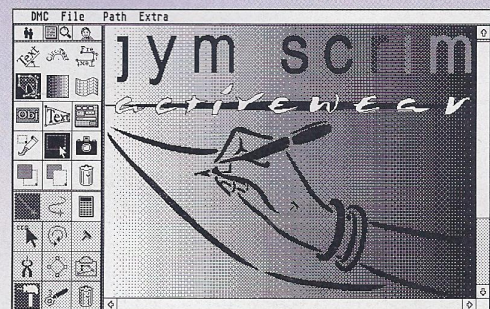
Most of the functionality of the mono Calamus has been improved upon, including much better typographic handling. Calamus SL carries out all of the colour separations, including all of the graphic files, internally as well, which saves you the step of having to supply pictures to the printers separately from your document. It is slightly slower than its mono predecessor, and demands 2 megabytes of memory. There was also a cut-down Calamus S version, which was essentially SL without some of the bundled modules.

Calamus in the UK has been through a number of different distributors. Originally handled by Signa Publishing, distribution was then moved to Halco, a reprographics company, following the demise of Signa. Currently UK distribution is provided by JCA Europe. The current price of Calamus (for either version) is a fraction of the original price, and either of these programs are well worth adding to your software collection.

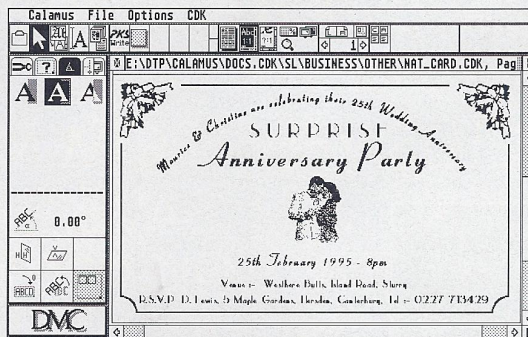
The Calamus System

DMC had several other programs to partner their flagship DTP program, notably Outline Art, a vector drawing package, which was capable of doing some amazing things to vector drawings (and especially text), but which was quite complicated to use.

Calamus fonts were originally edited using DMC's own font editor, bundled with Calamus at first but also available as a separate product. This worked as an accessory so it could be used within Calamus, but was not really up to the job of serious font editing, as it was quite fiddly to use, and didn't use the available screen size effectively. It wasn't long before third party font editors started to crop up, notably 3K's Didot/Lineart, Genus and DMC's replacement (and much improved) font editor, Type Art.



DMC's vector graphics mangler, Outline Art.



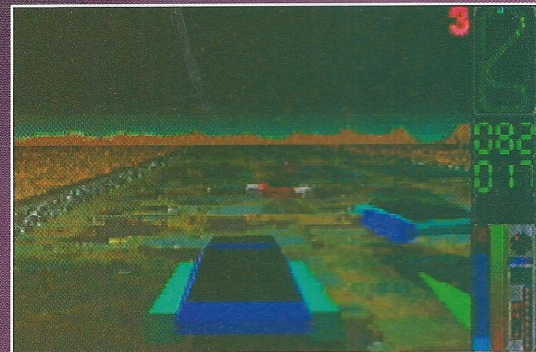
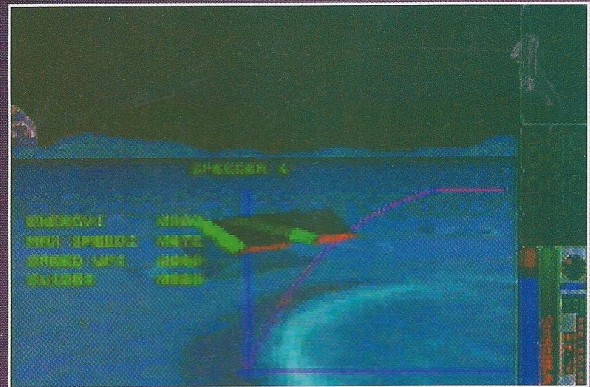
The WYSIWYG screen display lets you see exactly what your printouts will be like.

Outline Fonts

An outline (or vector) font can be thought of as a description of each character, rather than an actual picture. Instead of a picture of a circle, an outline description would say 'Draw a circle at this position, and at this size'. The real advantage of this approach is that you can easily change the size of an outline description - 'Draw the same circle, but make it 2.4 times bigger'.

CALAMUS 1.09n / CALAMUS SL Calamus File Options CDK	
UK Distribution: JCA Europe Ltd Contact: 01734 452416	Price: £59/£199 Requirements: 1Mb/2Mb ST, mono monitor

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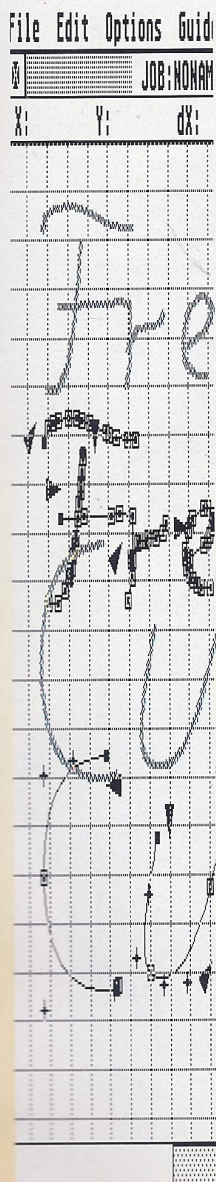
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Vectors away

Intimidated by the mysteries of vector art?
Confused by the complexities of Bezier curves?

Günter Minnerup offers user-friendly shortcuts into the world of DA's Vector.



Vector graphics can be very frustrating for the newcomer to computer art. Ordinary pixel painting programs are much more intuitive to use, because their working methods closely resemble the "natural" process of using a brush to apply paint to a certain area, and most computer novices have few problems getting quick results from something like the old classic, Degas Elite. The only problem with the finished picture, however, is that it cannot be enlarged or reduced without distortions because everything is fixed to a specific resolution. The answer, of course, is to use a vector art program instead.

Vector images are resolution-independent and can be scaled up or down freely without loss of quality. This is because they are not made up of pixels, but mathematical equations describing the outlines of distinct objects (lines, curves, circles), which can then be converted into screen pixels or printer dots at any size or resolution. The trouble is that only technical designers know intuitively how to make up complex images from such objects, and that because of their nature vector images can look rather "cold" and technical.

DA's Vector is easily the most comprehensively powerful vector drawing package for Atari computers, with some features that are the envy of famous PC and Mac packages such as Corel Draw and Adobe Illustrator. It can even double up as a business presentation graphics creator, with automatically generated bar graphs and pie charts, and an animated movie studio! These power features are balanced, however, by a number of neat tricks which can make the beginner's life a lot easier.

Everybody can draw straight lines, but Bezier curves with their mysterious

control points and tangents are a different matter. Originally developed for car body design drawing, they require considerable practice before you become adept at quickly knocking up elegant curved shapes with them. DA's Vector, however, offers freehand drawing tools that behave just like a hand-held pen, translating the trajectory of the mouse pointer into a series of linked curves. As a vector graphics novice, you will probably find it much easier to start in this fashion and then edit the result - cutting it up into separate sections, converting curves into straight lines, altering the line weight or fill colour. Make sure you leave DA's Vector's otherwise extremely useful "snap to" functions off at the freehand drawing stage.

Another easy entry point into the mysteries of vector art is to start with a pixel picture and let the software do the work of "vectorising" it. The Autotracer detects the outlines of particular colour or greyscale areas in the original and creates corresponding vector objects. Once this is done, you can edit them at will. Complex images, whether generated by yourself or the Autotracer, are best handled in different "layers": imagine these as a stack of transparencies, each carrying different component objects of the image, and any editing operations on one layer will leave the other layers undisturbed. This saves a lot of frustration in selecting small objects that are hidden beneath larger ones.

Another useful hint for beginners is to import other people's drawings - some good examples are provided with the program disks - and to "deconstruct" them: simply pull them apart, dissolving grouped objects and viewing them in the wire-frame "Quickdraw" mode, to work out how the final effect was achieved. Then try to put the bits together again -

but make sure you keep the original image safe and sound and don't overwrite it with one of your botched experiments!

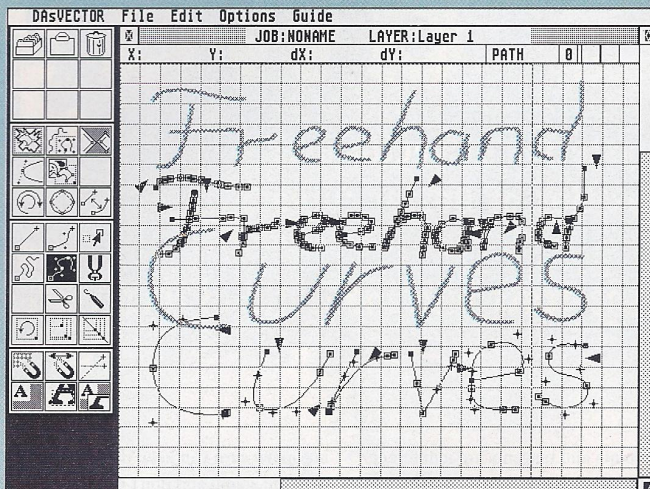
Tricks of DA's trade

The secret of producing appealing vector illustrations that don't look like lifeless technical drawings lies in the right choice of fill patterns, colours and 3D effects like shadows. DA's Vector's ability to import bitmapped graphics as fill patterns has many extremely useful practical applications, starting with the simple "framing" of a scanned photograph inside a rectangle of vector lines. The resulting combined object can now be scaled and rotated like any other vector object - if the frame is left transparent and hence invisible, this offers a very easy and flexible method of incorporating TIFF bitmaps into vector-based illustrations. Since these can in turn be "printed" to a TIFF file again for further editing in software such as Retouche or DA's Picture, the possibilities for combining the two graphics styles are virtually unlimited. Bitmapped fill patterns are particularly useful for overcoming the "coldness" or "artificiality" of vector graphics. If you are drawing an old-fashioned pen, for example, the wooden handle can be given a more realistic appearance by using a scanned-in wood grain as the fill pattern, and "rounding" its shape through judicious use of the software's "extrusion" function.

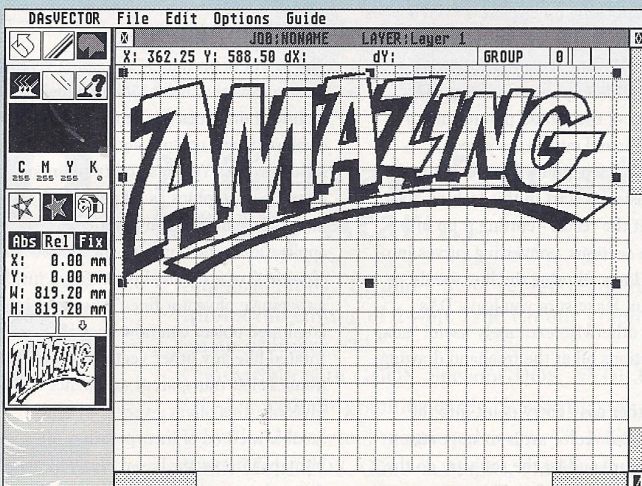
Although DA's Vector is strictly a two-dimensional drawing program, simulated 3D effects are easy to achieve in a variety of ways. The "3D extruder" is one of the more simple ones, offering the ability to define a light source shining on the object from a particular angle and thus produce all kinds of shadow effects, in different colours and depths. Much more

Vector steps

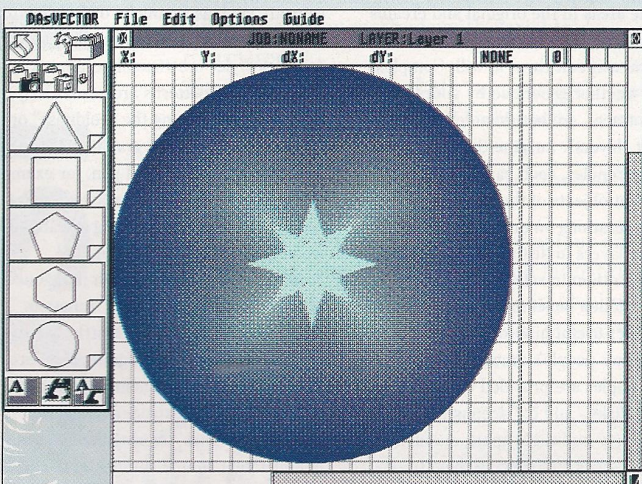
Like the writer afflicted with the "blank page" syndrome, the greatest difficulty faced by the vector arts novice is to get anything sensible at all onto the page to start with and use as a basis for further experiment. There are several easy shortcuts, however...



DA's Vector helpfully provides a couple of freehand drawing tools which will automatically trace your mouse pointer and calculate appropriate lines or curves. Fiddle around with both (they work differently) until you understand the underlying principles, then try to edit the objects created.



Another easy shortcut is the autotracer. This vector object started life as an ordinary IMG pixel graphic, was converted into a TIH greyscale picture and imported into the Autotracer for conversion into a grouped vector object. The fill pattern box (bottom left) shows that the original greyscale picture is still present.

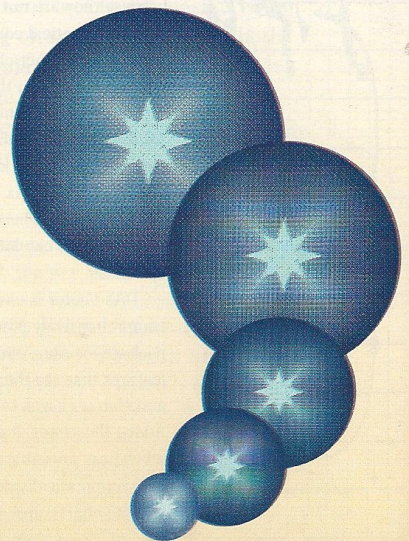


Some basic shapes are helpfully provided with your program disk, and can be accessed through the Vector Path library in the vector editing menu. As you build up your own shapes, these can be added to the library or saved in different libraries with suitable filenames for future use. No need to re-invent the wheel every time you start a new job!

sophisticated shadows and a range of other transformations can be achieved in the Animations editor and the "Time-Space converter".

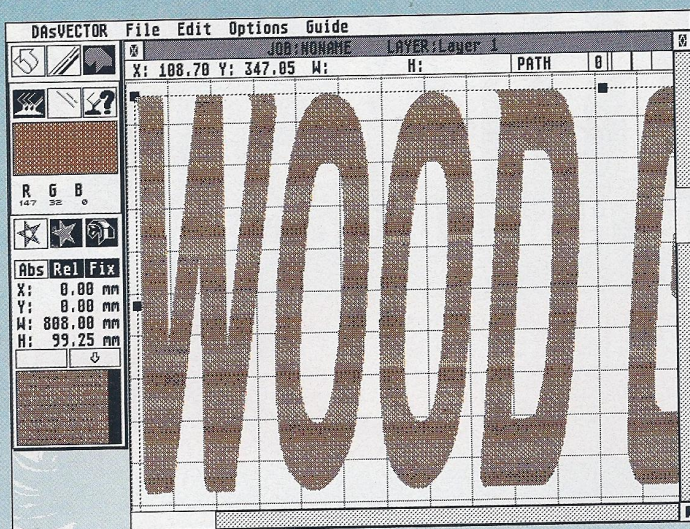
Animations? Well, even if you do not intend to compete with Disney studios, understanding the principle of the animations editor can be an enormous help in the creation of clever illustrations. Animations, after all, are produced by taking two keyframes and, through a process of interpolation, generate all the intermediate frames which, when replayed at a suitable speed, trick the eye into the illusion of motion. Put simply, the "Time-Space converter", rather than play the different frames sequentially, will superimpose them on each other for extremely realistic three-dimensional effects. Alternatively, just pick out a single frame which comes closest to the effect you wish to achieve when, for example, "filtering" a scanned image or "blending" two such images together.

Many illustration jobs involve the unusual presentation of text, for example letters filled with pictures or a company name projected onto a globe - the possibilities are endless. If you do have Disney ambitions, your cartoon animations will require title sequences or sometimes captions. Although not a DTP program - Digital Arts have provided DA's Layout for that, with which it is fully file-compatible - DA's Vector can handle both Calamus and PostScript fonts in its text objects. These are editable until - as you might wish to do at some stage - they are ungrouped into individual vector path objects. It may be overkill, but I have been known to employ DA's Vector as a headline generator that can go where the likes of Calamus and DA's Layout fear to tread!

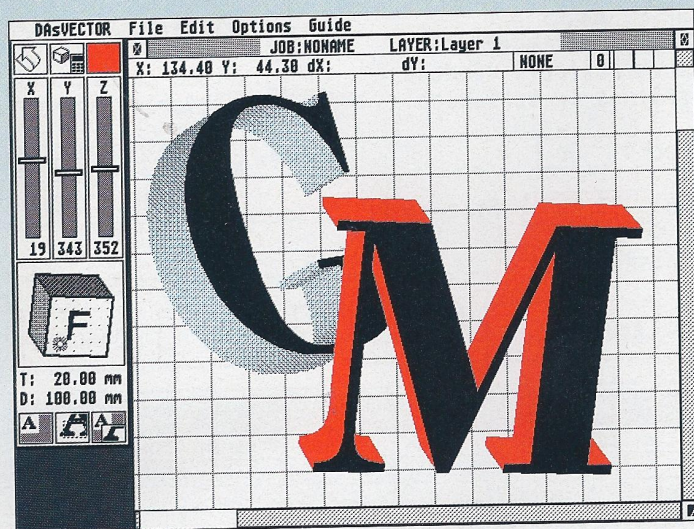


A real dimension

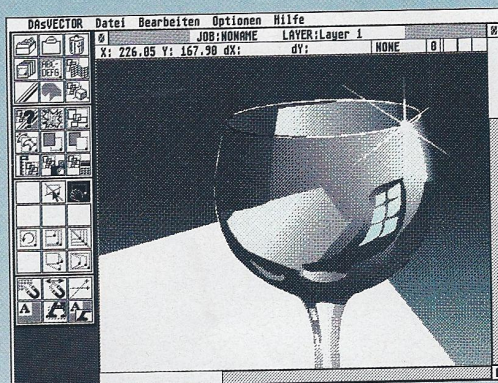
Fill patterns and 3-D effects are the key to achieving appealing graphics with a lifelike appearance and visual depth. Here's some examples of what can be done, in ascending order of complexity...



Text objects can simply be filled with an appropriately textured and coloured pattern, such as a wood grain for this imaginary wood filler paste advertisement. The 16-colour TT screen cannot, of course, do full justice to this pattern, but all will be revealed when output to a high-res imagesetter...

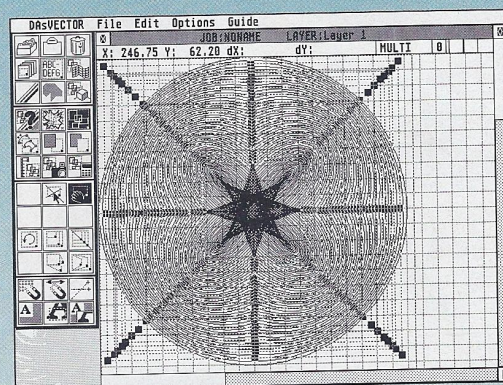


The 3-D extruder tool is extremely intuitive to use, offering quasi-three-dimensional tilting, shadows and user-definable light sources all from one dialog. A number of subtly different pictures generated in this way could be used as keyframes in the "Time-Space Converter" for even more dramatic effects.

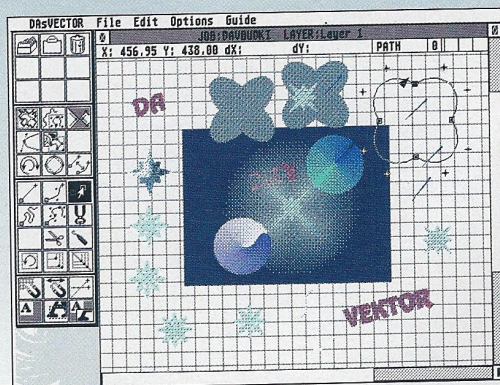


The full glory of what can be done with the Time-Space converter is displayed here with the sparkling depth and reflections of the wine glass. Such realistic colour gradients would be virtually impossible to create in any other way, certainly not with the likes of Degas Elite - and even if it could be done, you would still be tied to one size and resolution.

The learning curve



Sometimes the best way to analyse an existing picture in order to learn from it is to ungroup it into its constituent elements and display it in Quickdraw mode, without fills and colours.



Select each ungrouped object and spread them out over the work area to get an idea of how subtle colour gradients can be created, either with the Time-Space Converter or with the Multi-Copy tool.

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Array checks Max

Output to File name: _____

Pre-tokenised file: _____

```

BASIC-2 File Edit Search Block Options Program Tools
: E:\SOURCE\FORMWIND.BAS
Line: 3 Col: 1 Mem:40721
'constants for list objects
CONST H_UP=0,H_DOWN=1,H_DRAG=2,H_PAGE=3,H_BOX=4,H_MAX=5,H_COUNT=6,H_A

DECLARE SUB form_pos(x,y)
'DECLARE SUB StartWinMenu(BYVAL menuaddr&,BYVAL title)
'DECLARE SUB TextRedraw
DECLARE SUB ProcessToolbars(BYVAL aes_win,BYVAL tool,BYVAL clicks,BYV
DECLARE SUB OpenTearMenuWin(BYVAL treeadd&,BYVAL title,BYVAL closepro

SUB AlignToolbarMenu
    SHARED woMenuTree&(1),woToolbarTree&(1),woBaseX(1),woBaseY(1),woOffx(
    SHARED woObjectTree&(1),woCancelObj(1),hgt_font_h,common1,commonhandl
    STATIC workx,worky,workw,offy,box
    offy=0
    junk=wind_get(commonhandle,WF_WORKXYWH,workx,worky,workw,junk)
    IF woType(common1) AND woTmenu THEN
        tree&=woMenuTree&(common1)
        Setob_x 0,workx
        Setob_y 0,worky
        offy=hgt_font_h+3
    
```


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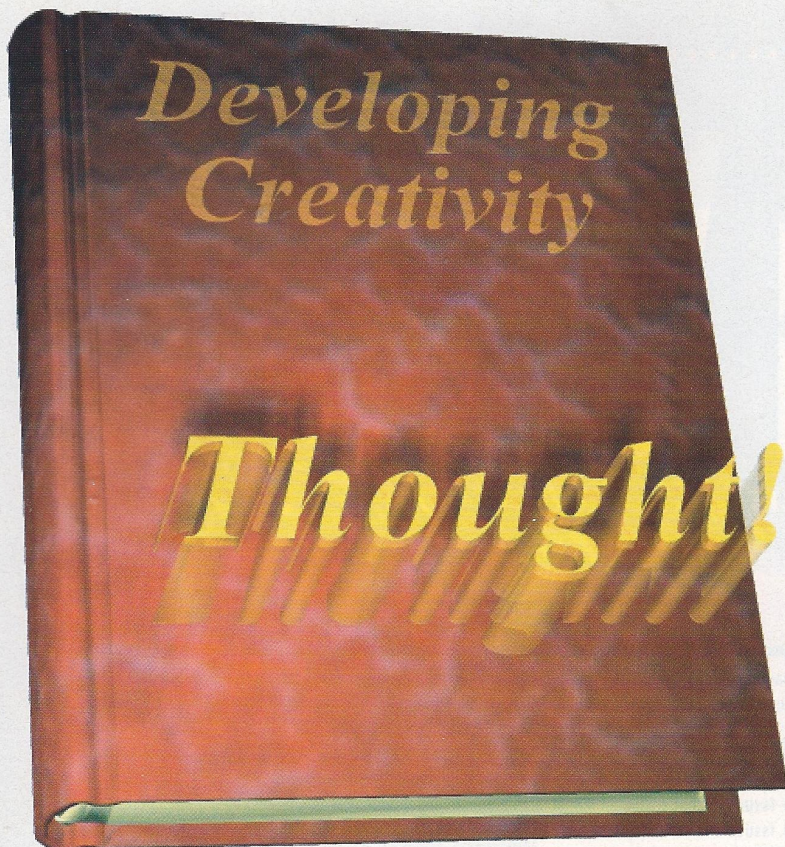
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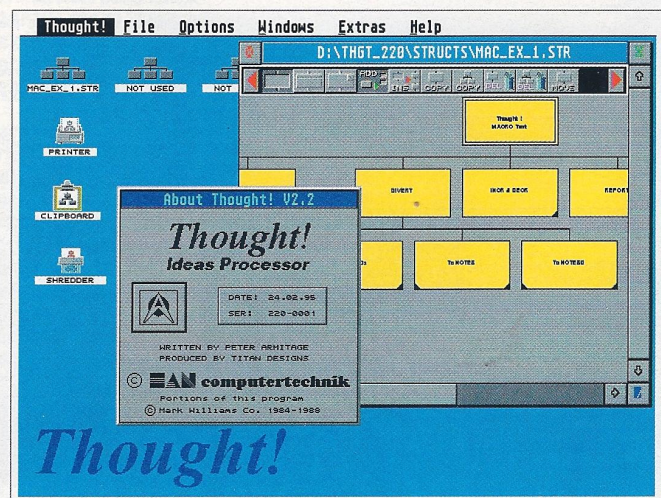
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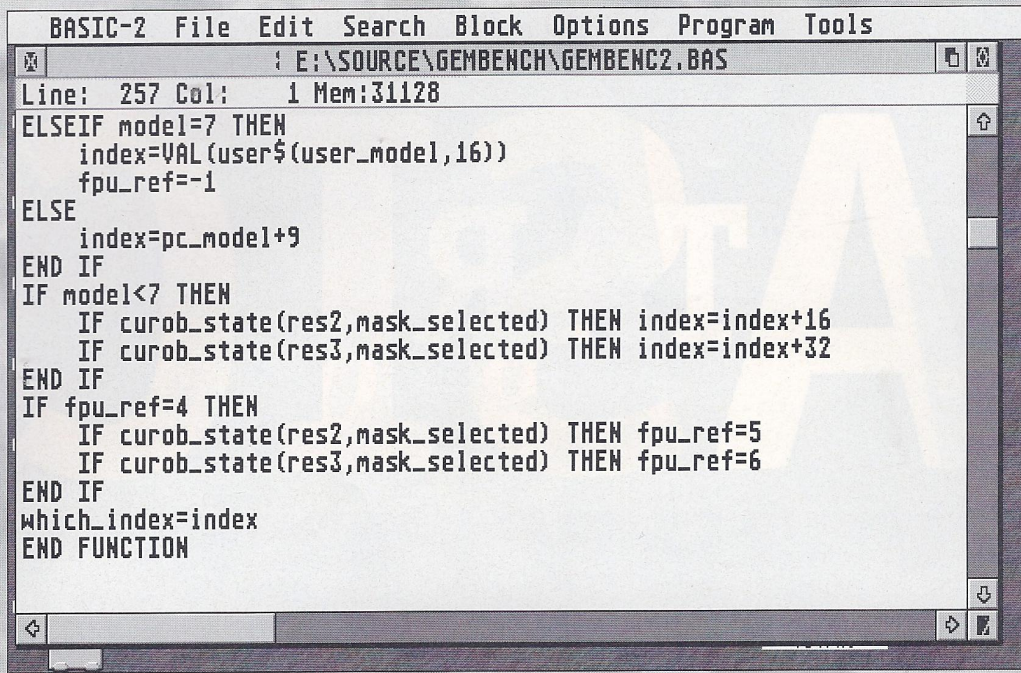
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BASIC

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```

BASIC-2 File Edit Search Block Options Program Tools
E:\SOURCE\GEMBENCH\GEMBENC2.BAS
Line: 257 Col: 1 Mem:31128
ELSEIF model=7 THEN
    index=VAL(user$(user_model,16))
    fpu_ref=-1
ELSE
    index=pc_model+9
END IF
IF model<7 THEN
    IF curob_state(res2,mask_selected) THEN index=index+16
    IF curob_state(res3,mask_selected) THEN index=index+32
END IF
IF fpu_ref=4 THEN
    IF curob_state(res2,mask_selected) THEN fpu_ref=5
    IF curob_state(res3,mask_selected) THEN fpu_ref=6
END IF
which_index=index
END FUNCTION
  
```

The HiSoft BASIC programming environment includes a GEM based editor and a compiler, removing the need for a multi-step programming process.

HiSoft BASIC is a very powerful programming language that gives you much more than just straightforward BASIC support. There is nothing to stop you from writing a word processor or a comprehensive art package using it. So although BASIC may sound basic, it is far from it - modern BASIC implementations are quite advanced, featuring highly structured programming techniques.

What BASIC has to offer to the novice is a quick start. You don't need to read thick and complex manuals just to get started - something you are just about to find out for yourself. By the end of this tutorial you will have a fully working program and enough knowledge to start programming on your own. But before we get down to the business of writing a program, let's take a quick look at what it actually means.

What is programming all about?

Programming can be a lot of fun, but also frustrating at times when things don't go as you expect them to. It is therefore very useful to understand how it all works, so that when things do go wrong you stand a chance of solving the problem.

A computer is a silly beast - it only understands a small number of commands in something known as machine code. Writing in machine code can be quite difficult as it bares no resemblance to any human language. There are several alternatives - C, Pascal and BASIC are known as high-level languages that make things a whole lot easier by allowing you to use human terms such as IF, ELSE, WHILE and STOP.

BASIC is probably the easiest general purpose language to start programming with. It was designed with beginners in mind, so it's quite easy to learn. Over the years it has been greatly improved, borrowing programming techniques from languages such as C and Pascal. BASIC is a little like every-day English, but its vocabulary is limited to just under 200 words. You'll be surprised to learn just how much is possible using just a tenth of these words.

Even though BASIC is relatively easy, don't expect miracles. Programming requires patience, but you'll be surprised at how quick it is to learn. So put your brains in gear and double-click on the HBASIC.PRG icon to load the HiSoft BASIC program. This is where you enter the source code and compile it to produce a program.

Computers are stupid!

Yes, computers are not very clever. When you want them to do something you have to be very clear about what it is that you want. You can't just type in "Hi, please display the words Atari World on the screen". The computer is just not intelligent enough to figure this one out. So let's say you wanted to write a completely useless program that simply displayed the words "Atari World" on screen. What exactly would you need to instruct the computer to do this?

The answer is:

```
PRINT "Atari World"
```

Try typing it into the HiSoft BASIC editor and then select Run from the Program menu. You have just completed your first BASIC program. Granted, it doesn't do much, but it's a start.

Basic Grammar

The PRINT command's name is misleading. What it means is print-to-screen. If you really want to print using a printer, use LPRINT instead of PRINT. Notice the quotes around Atari World - they are very important. Without them the compiler will produce a surprising result - 0 0.

Let's try something more interesting. First, clear the text you have entered and enter the following source code instead for a basic login program:

```
PRINT "Login: Please enter your name"
```

```
INPUT n$
```

```
PRINT "Hello"
```

```
PRINT n$
```

Now before you rush to run it, hold on for a second and think about what this program might do. The first line is obvious, the program will display the text "Login: Please enter your name".

Continued on page 49

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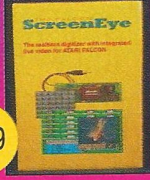
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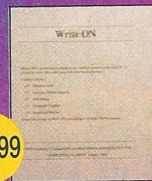
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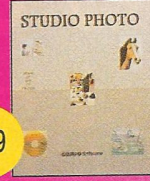
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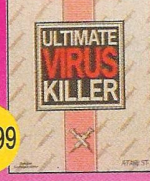
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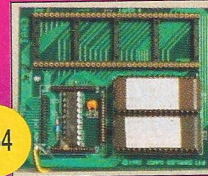
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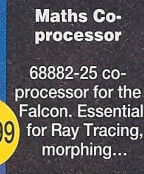
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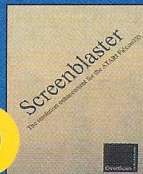
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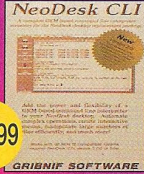
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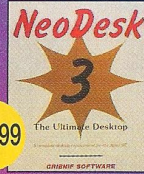
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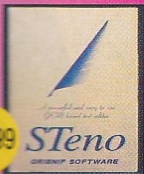
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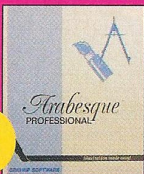
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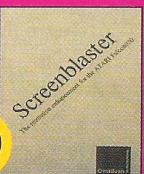
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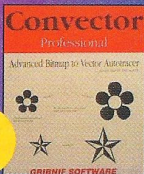
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The second line uses another BASIC command. INPUT displays a question mark and a blinking cursor, prompting the user to type in something - their name in this case. Once the user types something and hits Return, the program stores the text into the variable n\$. Don't be alarmed by the jargon, it will all become clear in a minute...

Variables

Variables are basically little slots of memory where your program can store information. You can store anything from a single digit to a complete text file into a single variable. There are several variable types, suitable for different jobs. The most used ones are the string variable, denoted with a dollar symbol (\$), which is used to store text, and the integer variable which is marked with a percentage symbol (%). The integer variable can be used to store whole numbers, but not fractions. There are other types of variables that are more suitable for such tasks.

A variable can be given any name consisting of the letters a to z and underscores, very similar to file names. They are not case sensitive so Atari_World and atari_world are the same. To store a value or text in a variable you use the equals symbol. You will find several examples below:

```
goods%=8000
```

```
tax%=1520
```

```
total%=goods%+tax%
```

```
a$="The dark side"
```

```
b$="of the moon"
```

```
c$=a$+" "+b$
```

```
averylongvariablenameisokbutwhatsthepoint$="OK"
```

```
PRINT total%
```

```
PRINT c$
```

```
PRINT averylongvariablenameisokbutwhatsthepoint$
```

Notice how a value and even a the sum of other variables can be stored into a variable. Numeric variables can also be multiplied, divided and subtracted along with a host of other mathematical functions, but string variables can only be added to each other. Try entering the above examples and see what the output on screen looks like to get a better grasp of things.

```
Login: please enter your name? Ofir
Hello Ofir
```

```
Login: please enter your nameOfir
Hello      Ofir
```

When using PRINT and INPUT with multiple variables, you can use a semi-colon (top) or a coma (below) to separate the items.

```
Login: please enter your name?
```

The INPUT command provides a simple way for the user to enter data.

PRINT and INPUT revisited

These two commands are probably the most important in BASIC because they allow the user to enter data and the program to display text and numbers back to the user. They are also very flexible and the small login program can be made to work and look much better.

First, INPUT has a built-in display facility. If you put a text string after INPUT, it prints it to screen and terminates the text with a question mark, a space and a blinking cursor, ready for user input. This removes the need to use the first PRINT command. Replace the first two lines with:

```
INPUT "Login: Please enter your name";n$
```

Notice the semi-colon used to separate the text to be displayed and the user input variable. Whatever the user types in is stored in the variable n\$. The second two lines can also be replaced with a single one, utilising the semi-colon as shown below:

```
PRINT "Hello";n$
```

So now we have not only improved the way the program appears to the user, but also removed redundant code, making the code lean and mean. In addition to the semi-colon, you may use a coma which inserts a tab in the compiled program. Try replacing the semi-colons with comas to see the effect. There are many more variations to the PRINT and INPUT commands, but you will have to check the HiSoft BASIC manual or a general BASIC programming book for more information.

If, then, else and but.

The way most programs behave depends on what the user enters. Take the Atari desktop for example. You double-click on an icon then the desktop opens a window, if you click on a file then it becomes selected. Most computer programs use IFs and THENs to respond correctly to user input. We could, as an exercise, develop our login program into a simple but effective security system. By asking the user for a password and then comparing it with a pre-defined one, the program can decide if it will let the user in. The program can then be placed in the AUTO folder to prevent others from accessing your data. Let's look at how this is done.

For the purpose of this example, let's use "Atari" as the password. If the user enters Atari the program will terminate, otherwise it will display a "Sorry, wrong password" message. Try the source code overleaf:

BASIC Compiler Options

☒ Add line numbers	☒ Break checks
☒ Error messages	☒ Overflow checks
☒ No "FN"s in libraries	☒ Pause checks
☐ Suppress default window	☐ Stack checks
☒ Underlines in variables	☒ Variable checks

Array checks **On** Max **Speed** **Safety**

Output to **Disk** File name: LOGIN1

Pre-tokenised file:

Cancel **Advanced...** **Debug...** **OK** **Compile**

Figure 1: to compile an executable program file, select Output to Disk from the popup menu and enter a name for the program.

```

INPUT "Please enter password";p$

IF p$="Atari" THEN

    STOP

ELSE

    DO

    LOOP

END IF

```

The first line prompts the user for the password which is stored in the variable p\$. On the next line the program checks if p\$ contains the word "Atari", if it does then the program stops, allowing the user to return to the desktop (or the BASIC editor). If it isn't the correct password, the program enters an infinite loop - that's what the DO and LOOP are there for. Normally, DO and LOOP have more powerful uses, but they are ideal for the job.

There are several ways to end a program, STOP produces the message "Program terminated - press a key to exit". If you prefer, you can use SYSTEM which aborts the program completely.

BASIC Compiler Options

☒ Add line numbers	☐ Break checks
☒ Error messages	☐ Overflow checks
☒ No "FN"s in libraries	☐ Pause checks
☐ Suppress default window	☐ Stack checks
☒ Underlines in variables	☐ Variable checks

Array checks **Off** Max **Speed** **Safety**

Output to **Disk** File name: LOGIN1

Pre-tokenised file:

Cancel **Advanced...** **Debug...** **OK** **Compile**

Figure 2: this is what the compiler options should look like to prevent anyone from stopping the program by pressing Control+C.

Producing a stand-alone program

Right, it's now time to compile a proper program. In HiSoft BASIC, there are two ways of compiling. The first, which we have used so far compiles to memory, allowing you to quickly try the program and immediately return to the BASIC editor and continue developing the program. The second produces a standard PRG or TOS program which you can run independently of the HiSoft BASIC package, just like any other ST program you may have. Once you are pleased with your programming efforts, you can pass such programs on to friends or even PD libraries.

To produce a stand-alone program select Compile from the Program menu. In the dialogue box that appears you will find a popup menu currently showing Output to ST RAM. Select Disk from the popup menu and enter LOGIN1 as the file name as shown in figure 1. Finally press the Compile button and after a few seconds you can quit HiSoft BASIC and locate the program LOGIN1.TOS on your disk. You can now run this program whenever you leave the computer unattended or set it to load automatically from the desktop whenever you start the system. If you are feeling really brave, rename the program LOGIN1.PRG and copy it to your AUTO folder. There is however a catch...

It is possible to abort a program created by HiSoft BASIC by pressing Control+C at any time. So a clever hacker confronted by your password program would easily get out of the DO...LOOP section by simply pressing the right key combination. HiSoft BASIC has several compilation options you can use to combat this. The quickest way around this is to select the Speed button in the compile dialogue box when producing the final program as shown in figure 2. The program will then be as secure as it can be, disallowing unwanted access to the system. It is best to use the Safety button while programming, because this enables HiSoft BASIC compiler to check your code and warn you if you're doing something wrong. Don't forget to reset the compiler back to output to ST RAM once you're done.

Do the loop

One of the most useful BASIC statements is the DO...LOOP. In fact, most programs use a loop at their very core. Any program lines between the DO and LOOP statements will repeat indefinitely. Normally, the program will contain a way out of the loop, indicated by a LOOP UNTIL line. Take a look at the following example:

```

DO

    INPUT "Please enter password";p$

    LOOP UNTIL p$="Atari"

    PRINT "Welcome..."

STOP

```

This version of the password program works a little better than the previous one, allowing the user to re-type the password in case he or she got it wrong the first time. The program will simply run the INPUT line again and again, until the user enters the magic password. When p\$ contains the word "Atari" the loop ends and the next line can be executed. Note the use of a Tab before INPUT in the second line. This is used to indicate that the line is inside a loop construct. Although the tab has no effect on the program, it does help when reading pages of source code, so make it a habit to insert tabs when applicable, using the examples here as a guide.

As you can see, there are many similarities between human and computer languages. The compiler reads the lines of code from top to bottom, and just as you'd expect, there are many ways of saying the same thing. A skilled BASIC programmer will be able


```

Please enter password? Tari
Please enter password? ataro
Please enter password? atati
Please enter password? aTato
Please enter password? ATARI
Please enter password? Atark
Please enter password? hmmm...
Please enter password? duh!
Please enter password? huh?
Please enter password? hehe...
Please enter password? HELP!!!!
Please enter password? Ouch...
Please enter password? █

```

Using an infinite loop gives an intruder too much of an opportunity to find the password.

to create many more versions of this password program, utilising a variety of BASIC commands. Before you go any further make sure you have understood everything so far, otherwise things will get increasingly confusing...

One for all

There is a small problem with the program - it gives the user too many tries at getting the correct password. It would be much better to limit the number of retries to say, three. One way of doing this is to use a variant of DO...LOOP that has a built-in counter. FOR...NEXT works exactly the same as DO...LOOP, but has a time-out feature when the specified count is reached. It does lack the UNTIL variation so this will be solved in another way. Check the example below:

```

FOR c=1 TO 3

  INPUT "Please enter password";p$

  IF p$="Atari" THEN

    PRINT "Welcome..."

    STOP

  END IF

NEXT c

DO

LOOP

```

The FOR...NEXT loop repeats three times before giving up. In each loop the user is prompted for the password which is then checked against "Atari". If the password is correct the program makes an early exit from the loop as before. The variable c is used as the counter, you cannot just type FOR 1 TO 3 - it will not work. Once the end of the third loop is reached the program continues to the next line. Here it just loops inside the DO...LOOP forever. If you want you could insert a BEEP command below DO. I'll leave you to guess what it does. Again, notice how tabs are being used to indicate constructs such as FOR...NEXT and IF...END IF.

Subs

One of the most valuable tools in a language like BASIC is the use of sub-routines and functions. Originally, BASIC programs used the infamous GOTO and GOTO SUB commands to navigate code execution, but this led to source code that even programmers couldn't understand - known as spaghetti code. By using sub-routines, you can make your programs much easier to understand, so that when you come back to them, you can follow the logic of the code with ease. The truth is that without subs and functions BASIC would be pretty useless in comparison to C which also uses similar concepts. The sample code below is an example of the same password program divided into sub-routines.

SUB infinite

PRINT "Timeout!"

DO

BEEP

LOOP

END SUB

SUB welcome

PRINT "Welcome..."

STOP

END SUB

FOR c=1 TO 3

INPUT "Please enter password";p\$

IF p\$="Atari" THEN

CALL welcome

END IF

NEXT c

CALL infinite

This apparently confusing code is really very easy to follow once you get the hang of it. The first rule is that SUBs are not executed until they are called by name, so both "infinite" and "welcome" SUBs are ignored and the first line to execute is FOR c=1 TO 3. This runs as before, but if the user enters the correct password the program CALLs the sub welcome which displays a welcome message and ends the program. Should the user fail three times, the FOR...NEXT loop ends and the program calls the sub infinite which is self explanatory. So there you have it, your first structured and modular program.

There are a few more useful things to know about sub-programs. All variables inside a sub cannot be "seen" outside it and equally, a sub cannot "see" variables in the rest of the program. You must use the SHARED command to enable a sub-program to see an external variable. If for example you wanted the sub welcome to access the counter variable it would look something like this:


```
SUB welcome
```

```
  SHARED c
```

```
  PRINT "Entered after";c;"attempts"
```

```
  PRINT "Welcome..."
```

```
  STOP
```

```
END SUB
```

The sub now uses the counter value to display the number of attempts it took to get the correct password.

Changing the password

A password program is not much use unless you can change the password. Let's write a separate program first that will generate the password and write it to a file. For the sake of simplicity the example program will write the file to the root directory of drive C, but you can change that later. Do change it to A if you don't have a hard drive.

Writing files is very easy with BASIC. The following example creates a file with the text "Atari World" in it. The file name is PASSWORD.INF.

```
OPEN "C:\PASSWORD.INF" FOR OUTPUT AS #1
```

```
PRINT #1,"Atari World"
```

```
CLOSE #1
```

The first line is the standard format for creating a file and preparing to write into it. The word OUTPUT is used to indicate a write operation and the #1 is used as a reference number for the file. Any further access to the file is done via this number. The PRINT #1 command works exactly like the standard PRINT command, but outputs the text to a file instead of the screen. Finally, the file must be closed. Leaving files open is a sure way of getting data corruption on the disk.

Make sure that the file and path names are valid and don't forget the backslash. If you run the program you will find the file in the root directory of drive C. Double-click on it and select Show to see the text. This is a standard text file that you can load into any text editor or word processor. Whenever you want to change the password, just edit this three-liner and run it again.

Reading the password

Now on to the job of adding a sub-program that will read the file from disk and store the password into a variable. The code below does just that.

```
SUB ReadPassword
```

```
  SHARED pass$
```

```
  OPEN "C:\PASSWORD.INF" FOR INPUT AS #1
```

```
  INPUT #1,pass$
```

```
  CLOSE #1
```

```
END SUB
```

The variable pass\$ is shared so that the rest of the program can access it. The rest of the routine is the exact opposite of the writing to file procedure. First the file is opened, then a variant of

Password program source code

```
SUB ReadPassword
```

```
  SHARED pass$
```

```
  OPEN "C:\PASSWORD.INF" FOR INPUT AS #1
```

```
  INPUT #1,pass$
```

```
  CLOSE #1
```

```
END SUB
```

```
SUB welcome
```

```
  SHARED c
```

```
  PRINT "Entered after";c;"attempts"
```

```
  PRINT "Welcome..."
```

```
  STOP
```

```
END SUB
```

```
SUB infinite
```

```
  PRINT "Timeout!"
```

```
  DO
```

```
    BEEP
```

```
  LOOP
```

```
END SUB
```

```
CALL ReadPassword
```

```
FOR c=1 TO 3
```

```
  INPUT "Please enter password";p$
```

```
  IF p$=pass$ THEN
```

```
    CALL welcome
```

```
  ELSE
```

```
    PRINT "Sorry, wrong password"
```

```
  END IF
```

```
NEXT c
```

```
CALL infinite
```


BASIC Compiler Options	
☒ Add line numbers	☒ Break checks
☒ Error messages	☒ Overflow checks
☒ No "FN"s in libraries	☒ Pause checks
☐ Suppress default window	☐ Stack checks
☒ Underlines in variables	☒ Variable checks
Array checks On	Max Speed Safety
Output to ST RAM File name: _____	
Pre-tokenised file: _____	
Cancel	Advanced...
Debug...	OK
Compile	

The compiler normally runs your program into RAM so that when you quit it, you are returned to the editor where you can continue your work.

INPUT is used to read the data and the file is closed.

I hope you enjoyed this brief tutorial in BASIC. There are plenty of books available on the subject since HiSoft BASIC is compatible with Microsoft QuickBASIC. The full password program is shown in a separate box and is also found on the Reader Disk, so if you have any problems check that you have typed in everything correctly.

Jargon

Variable: a basic unit of storage. A program can store numbers or text into variables. Variables can be manipulated using simple arithmetic or complex maths.

Compiler: a computer program that converts source code into machine code instructions. Most compilers offer various options to control the speed and size of the code they produce.

Sub-program: an independent section of source code within a larger program. Also known as a sub-routines or sub. All programs, unless they are very small, are written by putting together a group of sub-programs, each designed to do a specific task.

String: a series of characters strung together to make text.

Source code: the text the compiler uses to create an executable program.

BASIC Commands

PRINT - outputs text and numbers to screen. It takes any number of variables and constants that must be separated using a semi-colon or a coma.

INPUT - The counterpart of PRINT. It displays a question mark and a blinking cursor prompting the user to enter some text which must be terminated with a Return.

IF...THEN...ELSE - This allows for conditional program execution depending on the results of an evaluation. The following code is a simple example of its use:

```
IF a>5 THEN PRINT "Bigger" ELSE PRINT "Smaller"
```

DO...LOOP - If DO is placed on one line and LOOP on another, any lines in between are executed infinitely.

FOR...NEXT - A variant of the DO...LOOP statement allows for the use of a counter to define the number of times the loop is executed.

STOP - Stops program execution.

OPEN - Used to open or create files for reading and writing. This command has a number of variation to allow a program to access multiple files as well as hardware ports simultaneously.

PRINT #x - The same as PRINT but writes to the file x as defined in the OPEN statement.

INPUT #x - This command is similar to INPUT. It enables a program to read in files that were written to using PRINT #x. It writes to the file x as defined in the OPEN statement.

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Timeworks 2 manual

GST, the producers of Timeworks Publisher 2, were always renowned for the quality of their manuals. The Timeworks 2 manual is a model of clarity and will help any user get the best from this great program. We have the original manual available for just £14.99.

The full manual for just £14.99

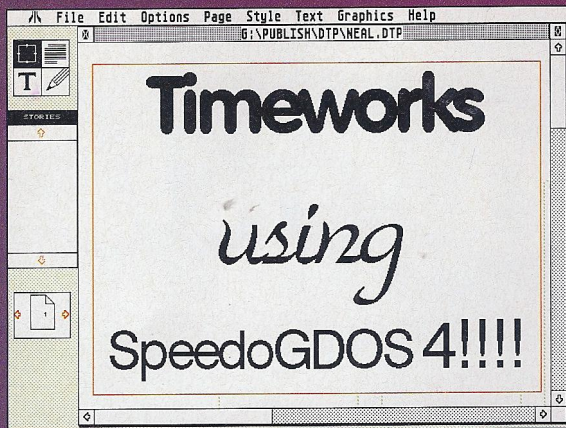
Get Speedo GDOS and Timeworks 2.04 for just £49.99. Save £50 when you also buy two font packs.

About fonts

The full version of Timeworks on the Atari World readers disks uses GDOS, the forerunner of Speedo GDOS. This means the fonts it uses are all bit map fonts, ie the font contains a collection of dots that go to make up each character. The fonts are therefore all fixed in size. For most DTP applications this is not very satisfactory. Whilst you can change the size of a bit map font using a font editor, the normal results mean a drop in

quality. Having created a new bit map font it can also be tricky to get Timeworks to recognise it. Speedo GDOS solves all this by using Speedo outline fonts. An outline font is a font that is stored as a collection of mathematical type expressions, ie lines, curves etc, not as a collection of dots. Speedo GDOS takes an outline font and generates a bit map font at any size you specify - subject of course to you having enough memory in your computer. Some outline fonts have hint information in them. Hint information is used to improve the quality of

fonts at smaller point sizes. This means that when you use a good quality original font you will get better quality at small point sizes than you would using an un-hinted font. The Speedo outline font format supported by Speedo GDOS has hints. However other outline font formats common on the ST such as Calamus fonts and Calligrapher fonts do not have hints. If you are using either of these programs you will see an improvement in output quality by switching to Timeworks 2.04 and Speedo GDOS.



Publisher 2 using Speedo GDOS Timeworks Publisher 2.04 and Speedo GDOS 4 in action!

Extra Speedo Fonts

There are two versions of SPEEDO GDOS that work with Timeworks 2.04, SPEEDO 4.2 and 5. You can choose which to buy if you don't already have a copy. However, any serious DTP user will soon want more variety. That report, menu, invitation, newsletter or advert can be easily livened up by a change of font. COMPO have two font packs with more than enough fonts to suit all but the most demanding Atari owner. Font Pack Office is designed for the designer producing documents typical to the office environment. It contains fonts ideal for reports, thesis, direct mail etc. Font Pack Gold is more for the 'designer DTP' type applications such as adverts and greeting cards. Both packs contain around 100 fonts each. The Office pack gives you a wider range of variants on the same font whereas the Gold pack contains more variety of font styles.

The number in brackets () gives the number of different styles of each particular font.

The fonts in the Office pack...

Futura (17)
Humanist Slabs 712 (4)
Blackletter (1)
Americana (4)
Bernhard Modern (4)
Caslon 540 (2)
Blippo (1)
Bernhard Bold Condensed (1)
Bernhard Tango (1)
BALLOON (3)
Bruce Old Style (2)
COPPERPLATE GOTHIC (5)
Bookman (2)
Caslon Openface (1)
Caslon Bold (2)
Futura Black (1)
Compacta (1)
Humanist 970 (2)
Humanist 521 ((11)
Aldine 721 (7)
Humanist 531 (3)
Bernhard Fashion (1)
Humanist 777 (7)
Caslon Old Face (3)
Aldine 401 (4)
Bitstream Amerigo (5)

The fonts in the Gold pack...

Amazona (1)
Impuls (1)
Bitstream Cooper (10)
American Text (1)
Brush 445 (1)
Egyptian 505 (3)
Zapf Calligraphic 801 (4)
Egyptian 710 (1)
English 157 (1)
Impress (1)
Poster Bodoni (2)
Kaufman (2)
Commercial Script (1)
Zapf Elliptical 711 (4)
UMBRA (1)
Cloister Open Face (1)
Goudy Heavyface (2)
Exotic 350 (3)
Zapf Humanist 601 (8)
MAXIMUS (1)
Goudy Handtooled (1)
Goudy Catalogue (1)
Hobo (1)
Wedding Text (1)
Freeform 721 (4)
Freeform 710 (1)
STENCIL (1)
University Roman (2)
INFORMAL OT1 (2)
SHOTGUN (2)
Candida (3)
Cloister Black (1)
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Sequencing - *beyond the manual*

How can you get more out of your sequencer than you put in? Ian Waugh looks at the association between music and colour and explains how to produce some tricky transpositions.

One of the nice things about sequencers is the tools they give you to manipulate your music. One of their most basic functions is transpose and you can usually transpose either individual tracks or a complete song quite easily using track parameters.



Figure 1

The most obvious use for transpose is to change the key of a song to suit a singer, for example, although transposition has many other more subtle uses, too.

Moody keys

Before you go blithely writing your next magnum opus it's worth giving some

thought to the key. Perhaps it comes to you subconsciously. Perhaps, like one famous songwriter, you can only play in the key of C.

Do you tend to drift towards certain keys when composing certain types of music? Many of the great classical composers did and had favourite keys for expressing various moods.

Many people believe there is a link between pitch and other natural phenomena such as colour, and that tones and certain types of music can influence various parts of the body in a positive way. We're not going to get too deeply involved in this but for those who are interested we have a table of the associations which you can experiment with. If you do produce any holistic music, do send us a copy.

MIDI Thru transposition

Beware of writing in an "easy" key, planning to transpose it later. Acoustic instruments and many synth sounds, too, change their character if they are transposed very far outside a certain range.

If you like playing in one key but need the piece to be in another, use the sequencer's Thru function and transpose all the tracks by the required amount. Most sequencers have a Thru function. It takes the incoming MIDI messages and transmits it using the parameters set on the currently-selected track. This enables you to play everything in on, say, MIDI channel one but route the sound to any

MIDI channel simply by selecting another track.

No transpose

If you're experimenting with transposition, one thing you won't want to do is transpose your drum parts. If each MIDI channel is on a different track this won't be a problem unless you apply a global transpose to the whole song. Some sequencers let you specify a MIDI channels which will not be affected by the transpose command. Notator, for example, simply calls it Disable Transpose.

Bigger bass lines

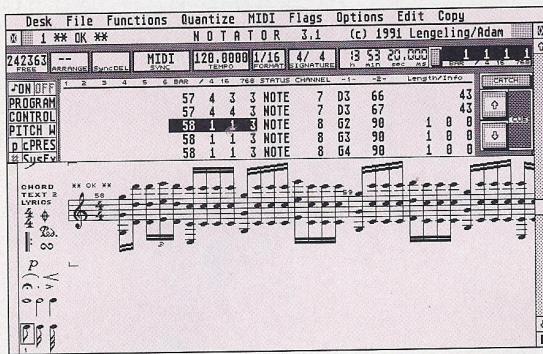
A quick and easy to beef up a bass line is to try transposing it down an octave. This may not always work if the sound is already at its lower limit but it's worth a try, especially as the bass sounds in many GM modules are actually an octave higher than they should be.

You can also add another sound an octave lower than the bass line. Try a sine wave for a sub-octave effect or use a synth bass or a sound with lots of harmonics to produce an analogue effect.

Double trouble

You can double up on any music part, not just bass lines but it's usually best with monophonic lines; chord parts can sound very cluttered and muddy.

The easiest way to add an octave is to



Adding one or two octaves to a fast-moving, one-note piano line can create the impression of it being played by a virtuoso.

use a ghost track (see issue 5 for more about ghost tracks). Piano and organ lines usually sound good but doubling up can be effective with short sounds such as brass stabs and staccato passages.

Try a two-octave transposition instead of one. Add two lines transposed an octave and two octaves. Delay the additional octave. Issue 5 also has more about creating echoes and using MIDI delay.

Harmonious harmonies?

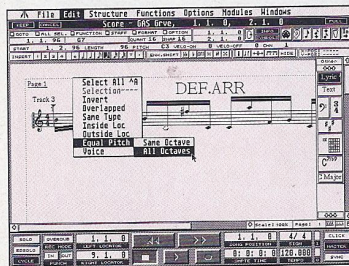
Can we use transpose to create harmony lines? The answer is yes and no. The trouble is, most sequencers' transpose functions work chromatically in semitone increments, not harmonically. That means

when you transpose a line you create a parallel part in another key.

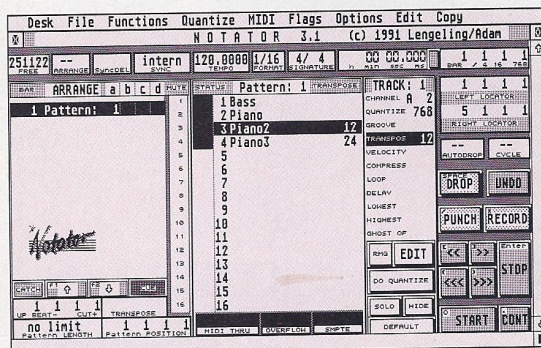
Look at Figure 1. The top line is a scale in C. The second line is a harmony a third

lower and the third line is what you get if you transpose by three semitones. Only five out of the eight notes are what we want. The fourth line has been transposed down by four semitones and only three notes are correct. You'll notice that the third line is a scale in A and the fourth a scale in A flat.

Now even though these are not "correct" transpositions, they may still



Cubase's Select menu lets you select similar notes throughout a part for global editing and transposing.



Sequencers such as Notator have a Transpose track parameter making it easy to experiment with transpose effects.

sound okay under certain circumstances. Try them with fast brass lines and vocal parts, for example. The best transpositions are thirds, fourths and fifths.

Correcting computer transpositions

If you want harmonically correct transpositions you'll have some editing to do. One solution is to change the offending notes by hand. If the piece isn't too long this may be the best option but if there are a lot of notes to change you may be able to get your sequencer to help.

Check to see which notes you want to change, taking into account any accidentals. Select all the offending notes and transpose them up or down a semitone as required. Logic has a Select Similar function which can help otherwise you may have a lot of clicking to do. It might be easier to work on a few bars at a time rather than trying to do the entire part.

Country and Western harmonies

Here's an idea nicked from the auto accompaniment features on portable keyboards. Many have a facility called Auto Harmony which adds extra notes to a melody line based on the accompanying chord.

One of the options puts the harmony notes above the melody note and this creates a sort of Country & Western effect. Try it with thirds, fourths and fifths and reduce the volume of the harmony note so it doesn't overpower the melody. You could also add a slight delay to the harmony. Try it with guitar and banjo sounds.

This full Auto Harmony effect is too complex to duplicate exactly in a sequencer because the extra notes depend not only on the melody note but also on the prevailing harmony. You could, of course, apply the principle manually although we're really looking for ways in which the sequencer can automate the process.

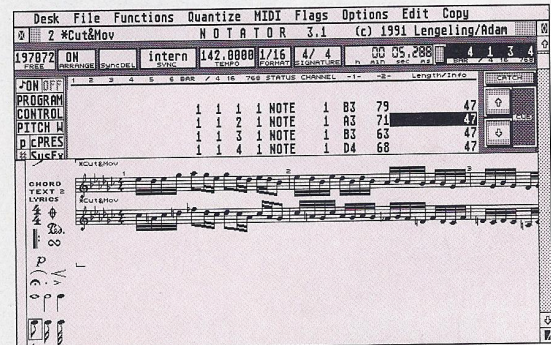
The colour of keys

According to some holistic practitioners, tonality is linked to colour, zodiac signs and parts of the body. Here's a list of the associations.

Colour	Zodiac	Sign	Parts of the Body
C	Violet/Gold	Virgo	Intestines, nervous system
D flat	Red	Aries	Head, ears, eyes, nose, subrenal glands
D	Yellow/Crimson	Libra	Kidneys
E flat	Yellow	Taurus	Neck, throat, speech organs, thyroid
E	Red/Scarlet	Scorpio	Sex organs
F	Purple	Sagittarius	Liver, hips, thighs
F#	Violet	Gemini	Lungs, arms, shoulders, nerves
G	Indigo	Capricorn	Knees, bones, teeth
A flat	White/Green	Cancer	Breasts, stomach, alimentary canal
A	Indigo	Aquarius	Ankles, shins, circulation
B flat	Orange	Leo	Heart, spine, back
B	Blue/green	Pisces	Feet

Multi-timbral harmonies

The final suggestion is to use different sounds for each harmony lines. Some portable keyboards have this feature and it can be especially effective with brass, woodwind and vocal parts



Using a chromatic transposition can produce some very interesting harmonies as in this example of a fast brass line.



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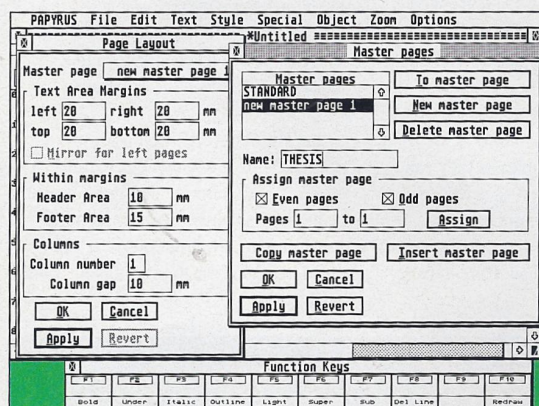
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Word wizards



Word processors are more than typewriter replacements, as Günter Minnerup explains. Used with some forethought, templates and macros can take repetitive drudgery out of most writing jobs.



Any number of named master pages can be defined in Papyrus. All the text and graphics elements, as well as the page layout, of each master page will be repeated to all pages in the actual document.

Not so many years ago, when personal computers and word processors were still comparatively new, they tended to be treated as hi-tech replacements for typewriters. I remember one colleague, for example, who called me round several weeks after the delivery of his Amstrad PCW to help out with some technical problem and who, as I

discovered to my horror and amusement, still used the "carriage return" key to insert hard spaces at the end of each line. People have got a little wiser to computer technology now, and

for the younger generation typewriters have now receded into the past along with vinyl LPs and the Bay City Rollers. It is still estimated, however, that the average user only exploits a tenth of the features of modern word processing software, and this is probably not unrelated to a general

reluctance to what can be pretty awful and intimidating manuals.

Forethought

Not all the features of today's state-of-the-art word processors are needed by everyone, of course. If you never write books or academic theses, you are unlikely to require footnotes, for example. Most ordinary mortals not involved in the mailshot canvassing business or running a society with a long membership list will ever need to know about mailmerging either. But the fact remains that your software is seriously underused every time you do something manually that could be automated with a bit of forethought.

Forethought is the key word here. Even the most intelligent computer cannot guess your intentions and there is no substitute for spending a few pressure-free hours evaluating your needs and teaching the word processor exactly what tricks you will expect it to perform in future. It is probably this hurdle at which most of us fail: under pressure of producing instant results - getting that urgent letter out, finishing the overdue thesis and so on - we go for the quick improvisation rather than the carefully planned work routines, even if these would save a lot of time in the long run.

The two most important underused features are templates and macros: templates are ready-made documents with all the essential and repetitive bits predefined, leaving you to only fill in the new, variable text, and macros can be anything from font and style macros helping to impose a uniform appearance on your text to complex command sequences amounting to programmed extensions to the power of your word processor. In this first of two articles, we

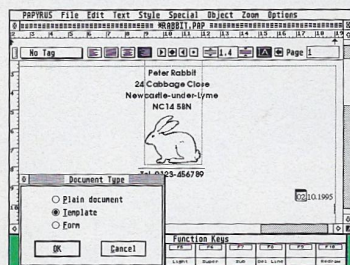
shall explore the uses of templates, leaving the power of macros for next month's instalment.

Standard elements

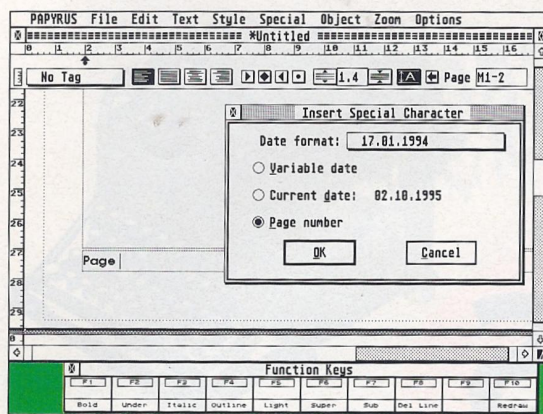
Almost every document you will ever produce on your word processor will have some sort of constant element in it: the best example are letterheads for your correspondence, but when you think about it this principle applies to everything else, too. Fax messages have a standard header, memos have "To:", "From:", "Date:" and "Re:" fields, longer documents have headers and footers, often containing a page number and short-form description of the document title and chapter number.

There are even invisible standard elements, such as columns, margins and basic font and style definitions. You could, of course, set these up every time you write a letter, start a new report, send off a memo or invoice a client - but why go through the whole rignmarole when computers are supposed to save time and make life easier?

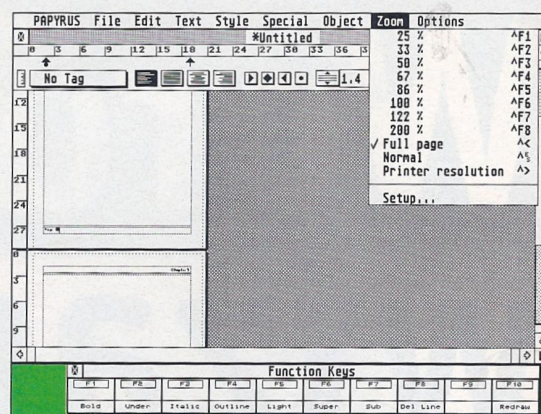
In their most elementary form, templates are simply pre-saved documents: you load them back in and complete the missing bits. At the most sophisticated end of the market, Papyrus offers you the option of saving existing documents as templates. As a word processor with DTP ambitions, Papyrus even supports master pages which have different pre-set layout elements for left and right-hand pages and are ideal for long documents such as reports, manuals, theses and, of course books. Master pages can be loaded and assigned to an existing document, they can also be saved as templates.



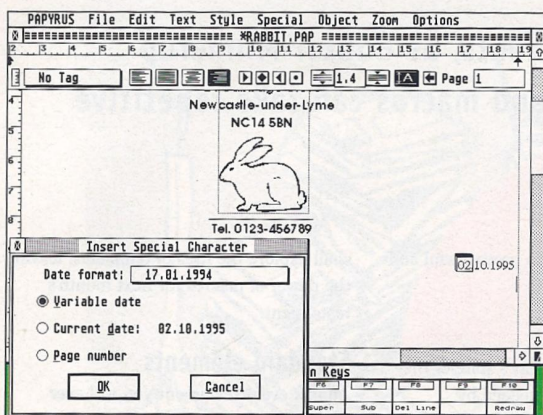
Once the master pages have been prepared, they can be saved as a template by clicking on the Document Type item in the Special menu.



The page number special character will be replaced by the actual page number when it comes to printing the document. With different right and left master pages, the footer should either be centred or ranged left and right alternately.



These master pages contain a header with the Chapter title and a footer with the page number special character in it, as well as horizontal lines to separate headers and footers from the main text area.



The variable date special character rather than the current date one should be used in letterhead templates, or all your future correspondence would carry the same date (that of the day when the template was prepared).

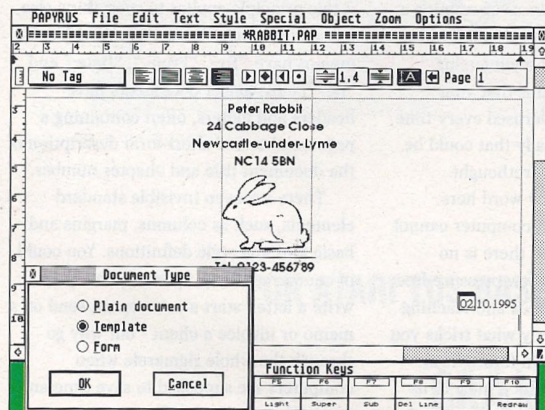
Special characters

Apart from text and graphics, the most important element in templates are special characters or variables which, at the time of printing, are replaced by actual values. A letterhead template should, for instance, include a date variable: this can then become the date when you wrote the letter, or the date when you actually get round to printing it. Page numbers are another example of variables as they can change with new additions or deletions to the text, or even after reformatting or using a different printer.

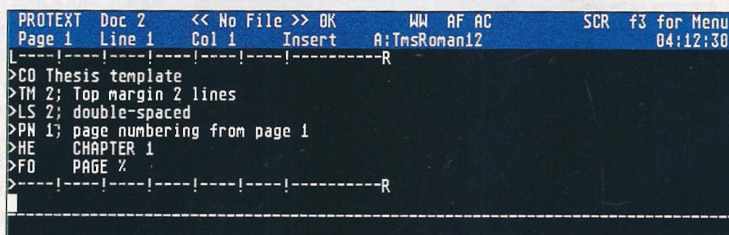
Once the template documents have

been defined, you should place their icons on the desktop or at least install their extenders with the word processing application used: instead of going through the cumbersome routine of loading the program and selecting the template document, you will be able to simply double-click the icon or filename and to get to work straight away.

But this is just the beginning of what you can do to automate your writing chores. Watch out next month for some examples of macros, from simple style macros to powerful routines that add completely new capabilities to your word processor.



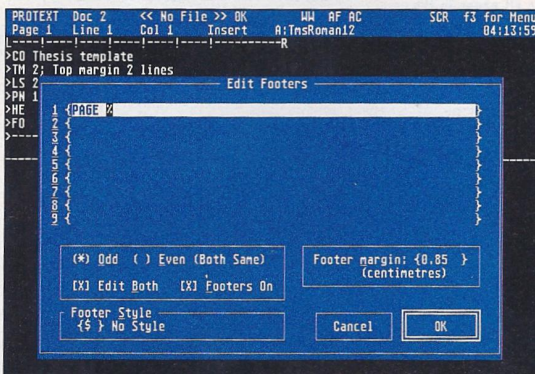
Like master pages, ordinary Papyrus documents can be defined and saved as templates at any time. When converting existing documents to templates, make sure that all non-standard text and graphics have been deleted.



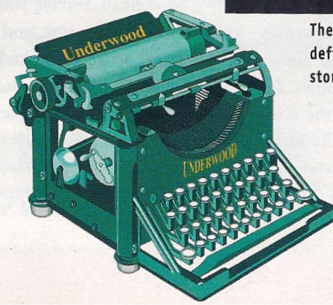
Another Protex template, this time for an academic thesis with headers and footers defined through stored commands. The "%" variable is replaced by the actual page number when printing.



Protex templates are ordinary documents beginning with standard "stored commands" to define layout settings, a ruler and the fixed text (and graphics, though these are not visible with Protex) elements. The &sys_date& system variable does the same job as the "variable date" character in Papyrus.

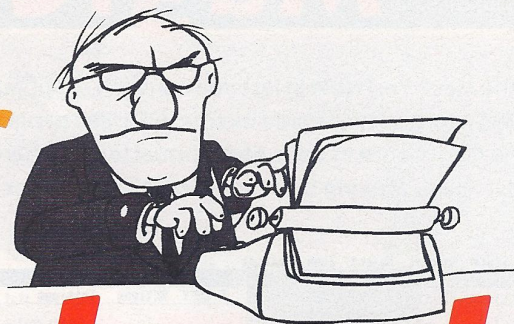


The Document Settings dialogue offers an alternative method of defining template elements such as headers and footers to the stored commands.



<http://exxos.www.idnet.com/IMPULSE/atari/last/>

Under Protext



Prottext has long been known as a writer's word processor.

Mark Baines explains why he thinks Prottext is the best word processor on the market for Atari owners. Take it away Mark...

Without a doubt, Prottext is the best word processor you can get for your Atari. Note that I said *word processor* - a program that processes words and produces output onto paper. I didn't say that it was the prettiest or that it uses the most modern GEM interface but it's the best at its job. For me, there are four qualities to consider: features, speed, printing quality and usability.

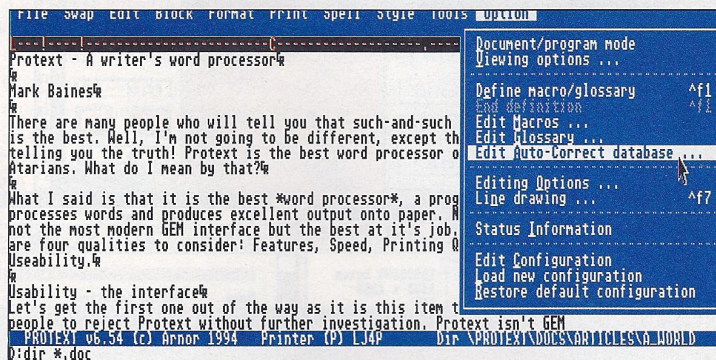
Usability - the interface

Let's get the first one out of the way as it is this item that causes most people to reject Prottext without further investigation. Prottext isn't GEM-based although it does use a graphical interface with all the attributes of a GEM program except for the lack of windows.

It has full mouse control, used to scroll and select text as well as control menus, dialogue boxes and even the tabs on rulers. The menu bar becomes available with the click of the right mouse button replacing the information line at the top of the screen. The ten menus enable access to all parts of the program and often provide dialogue boxes for interaction.

These have the normal attributes of buttons, editable text lines, real-time scroll bars, arrows and so on. All items in a dialogue box can be accessed with the mouse or keyboard. Windows are lacking which can be a nuisance under a multitasking system but it does work under MultiTOS and MagiC (set Prottext to singletask). The screen can be divided to show two files at once and the size of each 'half' changed.

So, not GEM, but an effective and very usable graphical user interface (GUI)



Menus operate just like under GEM. The Command Line can be used to run external programs or Promerge ones as well as disk, file and program functions.

nevertheless. There is also a command line for people who are happy with entering MSDOS-type commands and access some of the more powerful features of the program. What's more, external programs can be run quite safely from here, even GEM ones.

Most people cope very well with this GUI but perceive the lack of a WYSIWYG display to be a real problem. Not so, there is a Print Preview display which very accurately shows the layout of your text. But more important is the fact that Prottext is a very precise and intelligent program that has absolute control over your printer and its fonts. Prottext simply doesn't make the mistakes that most DTP and other word processors make of printing something different to what you thought was on the screen.

There are very few programs that are truly WYSIWYG as most GDOS users soon learn. Prottext shows all the layout details faultlessly and quickly on screen. What Prottext doesn't show is the font styles of your printer on screen (although it will show bold, underline, italic, sub and

superscript) but the Preview helps here. The payoff is that this results in very fast processing.

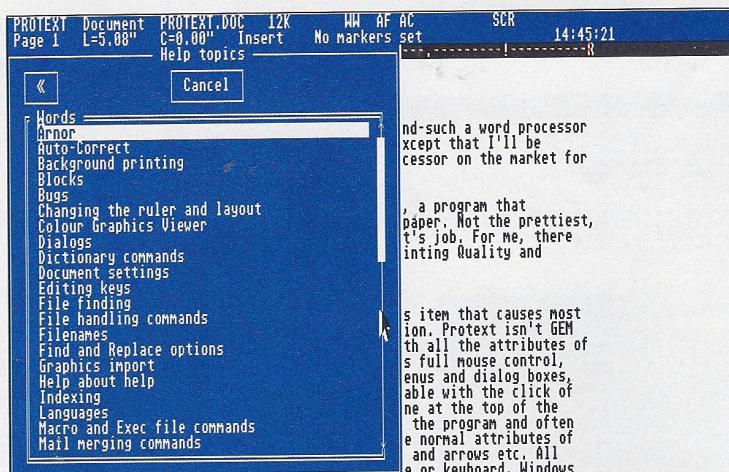
Speed

Prottext is the fastest there is. It scrolls, it formats, it spell-checks, it searches and replaces faster than any other. This is one of the reasons why it is so popular with journalists and writers on Atari and PC platforms. Printing is also very fast because it has less processing to do and less to send to the printer than other word processors which use computer-based fonts rather than the printer's. In fact, on a sustained run the limiting factor is the speed of the printer not the program or computer.

Printing Quality

The output is second-to-none. A huge range of printers are supported and using the printer's internal fonts means that the quality of printing is as high as the printer can manage, even in colour.

Using fonts installed on the computer, such as GDOS fonts (even SpeedoGDOS



There is extensive on-line help available at the touch of a key which saves having to refer to the manuals.

and NVDI's TrueType fonts), results in the computer having to turn them into bitmap images so that what the printer produces is a 'picture' of the page which is prone to some loss of detail and inaccuracy of text placement. The only restriction with Protex is that you are limited to the number of fonts the printer contains although with most modern printers this isn't too much of a problem. However, you can easily enable Protex to download bitmapped fonts to the printer before printing.

One of the newer features of Protex is the ability to use scalable fonts such as those built-in to many laser printers, like the LaserJet 4 or 5. These can be used at any size and placed anywhere on the page. These can be mixed with any other font on the same line in any style giving Protex DTP features.

Images can also be imported and printed, in colour on printers that can manage it. This means that Protex can be used to create flyers, small posters and sophisticated letterheads just like any DTP program.

Features

There are too many features to catalogue them all here but suffice it to say that Protex has all those you would expect and many more besides, some extremely powerful. It amazes me that some word processors currently available don't even have a word count or a thesaurus!

There is a 43,000 entry thesaurus and the excellent 110,000 word Collins dictionary has legal and medical supplements. Entries can be added to create a user's dictionary or even excluded, for instance to standardise the use of words with different spellings. A unique feature is Auto-Correct which you can teach to automatically correct regularly made typing and spelling mistakes. It will even capitalise proper nouns and words at the start of sentences.

This database and the user dictionary can be edited.

A similar feature is the Glossary, where you can assign large pieces of formatted text to certain short abbreviations. Macros are keys that can be assigned text (such as your name) or tokens. Most features of the program have a token number which can be incorporated into a macro. So, it is possible to reassign all keys and key commands to suit your own preferences. Also, tokens can be built up one after another so that new commands can be created, such as 'delete to end of text' or 'swap lines'. See the box for an example.

Most functions can also be accessed on the command line using commands not unlike MSDOS. A series of these can be saved as a batch file and executed by typing '>x (name)'. Tokens can also be added creating some quite elaborate new commands. For instance, I can carry out a whole series of search and replaces that turns any fixed formatted text file (such as those you get with PD programs) into a reformatable one to be used in Protex. Another file turns a document into ST-Guide HYP file, deletes the old version and places the new one in the correct folder for me.

Promerge

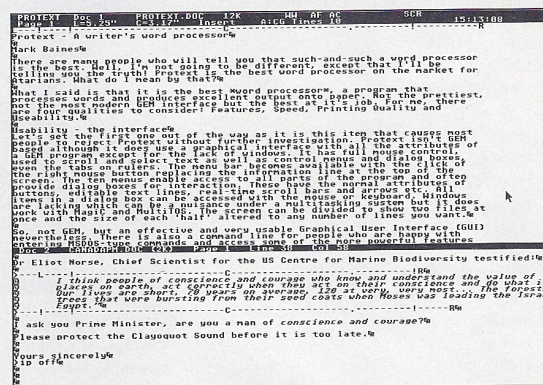
If this wasn't powerful enough, there is a built-in programming language called Promerge. This was originally designed to control very sophisticated mail merges but developed into a powerful language in its own right. Again, these programs can be executed from the command line. One such program is run automatically in letters and converts dates so that they include the suffixes 'st, rd or th' to date numbers. Another enables me to add shaded and shadowed boxes to my text on the LaserJet. Again, see the box.

All formatting can be controlled globally from menus and dialogs, but at any time Stored Commands can be

entered in text to change those settings. This facility enables different rulers to be set at any place, multiple columns set, justification and header/footer text changed, footnotes entered and so on. This allows for exact control of the layout and style of the document.

Book writers will love the automatic creation of Indexes and Tables of Contents, saving many hours of laborious work. Again, these features can be enhanced with judicious use of stored commands and control codes so that they produce exactly the output you want and not something set by the programmer.

Control of the text on the page is as you would expect. Text styles are used where the typeface, font, text attribute, point size and line spacing can all be assigned to certain keys and the codes inserted into the text. There is full control over accents and access to any ASCII character, even in different font sets



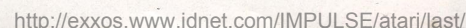
supported by your printer. Boxes and lines are easily drawn, columns and rows of numbers added up, multiple columns intelligently laid out and a full control over cursor and blocks of texts. The Box Mode allows vertical columns of text to be selected, so that a column of numbers can be moved in a table. Wonderful!

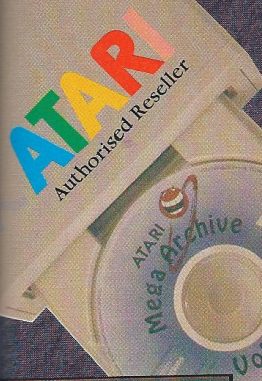
Conclusion

In essence Protex is powerful, packed full of features and fast, producing first class output. I've used every other Atari word processor and many DTP programs so the proof of the pudding came when I needed to produce a 340 page book last year.

I wrote and typeset it entirely using Protex which produced the camera ready copy. It was done in far less time than any DTP program or other word processor could have managed with far less hassle due mainly to my confidence in knowing that Protex will get on with the processing letting me tackle the words. No, Protex isn't WYSIWYG but it is WYWIWYG - *What You Want Is What You Get* and to me that is what matters.

The screen can be split to show two files at once. The size of the two halves can be altered by dragging the splitter bar. Here, the 50 line mode is selected which uses a smaller screen font. Formatting characters are displayed and the layout of the italicised text is controlled by the ruler above it.

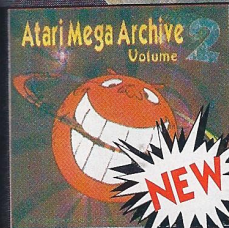
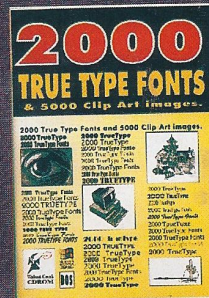




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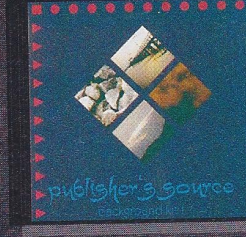
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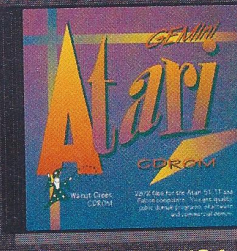
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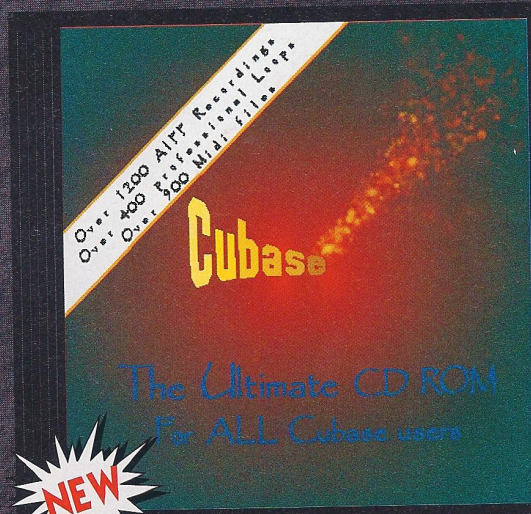
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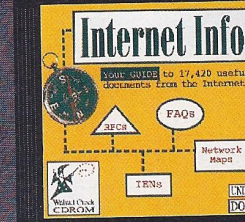
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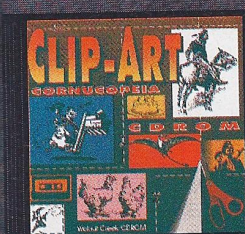
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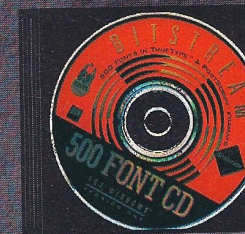
17,420 essential files
Most useful internet info



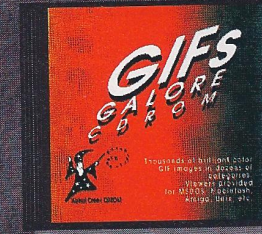
Complete OS on CD-R
Gem Installation program



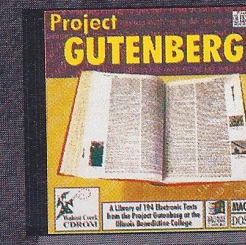
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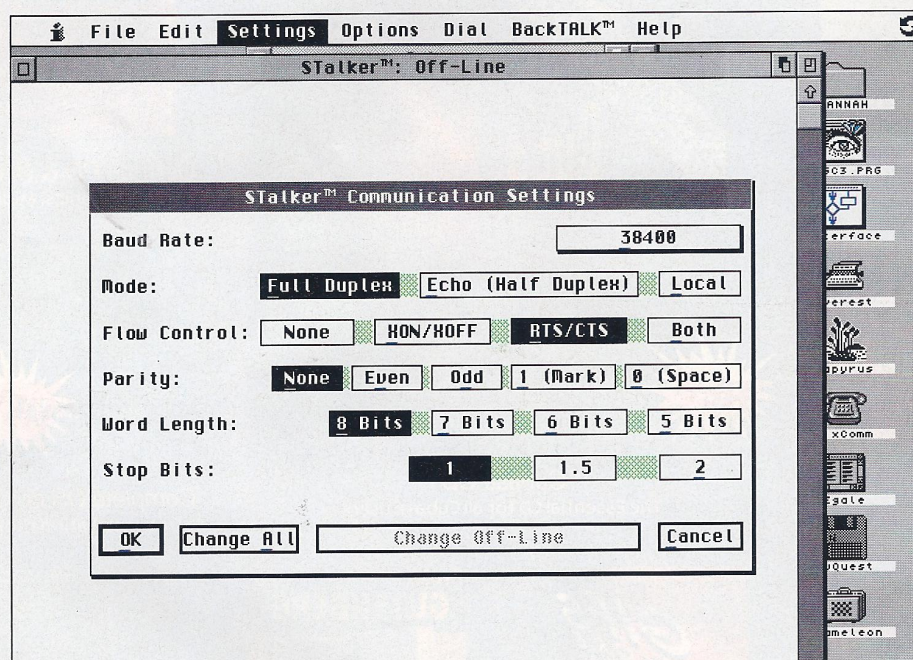
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Inside

Out

This month Paul Rossiter continues his quest for the truth with a look at the ST's various ports.



Stalker at work.

Even the base Atari ST is blessed with a wealth of ports to connect to the outside world and as they are all standard the programming of them is straightforward. The ports include, full MIDI ports, cartridge port, serial port, parallel printer port and floppy/hard disk drive ports. The enhanced machines, the Mega STe and the TT also offer extra serial ports, SCSI ports and networking ports (LAN).

The serial port is mainly used for connecting to modems, old serial printers or for multi player games where two computers talk to each other along the serial port. While the parallel port can transfer 8 bits of data at a time at very

high speed the serial port is limited to one bit at a time at a much slower speed.

To send data the receiver has to be able to work out where the start of a character is otherwise it would get confused and not be able to decode the data stream. To overcome this problem each data byte is surrounded by a set number of start, stop and parity bits. These bits are user programmable in the communications software and must be set correctly. A typical set up is 1 start bit, 1 stop bit, 8 data bits and no parity bit giving a total of 10 bits per byte.

As standard the ST can send at 19,200 baud (a baud can be considered as a bit per second) which with a 10-bit character gives a throughput of 1.92Kb/sec. Atari



World has carried details of simple modifications to give much higher port speeds which work well and allow high speed modems to be used correctly at speeds of up to 100,000 baud!

The cheap PC external fax/modems which are now readily available at around £60 work well with an ST, with compression they can achieve speeds of 50,000 baud on a good phone line.

Mega STe and TT

Both of these machines have the same extra serial circuitry, a Z85C30 multi protocol serial chip which produces two separate serial ports designated port A and port B. Port A can be used as either the LAN port or as serial port A but not both simultaneously, port B is a dedicated serial port.

When used as a LAN port the serial lines are heavily buffered and can drive several tens of metres of twisted pair networking cable, its a pity really that no one has written any software for the LAN!

Most common serial ports are asynchronous which is much easier to connect to but cannot run as fast as a synchronous connection, when used in its LAN mode the port is run synchronously which allows speeds approaching 1 Mega bit per second, far outstripping serial networks like Apple Talk. These serial ports can be driven at high speed and allow simultaneous use of up to four modems when using a suitable package such as STalker.

RS-232

The RS-232 communication standard is quite complex and covers the ports hardware in terms of signal lines and voltage levels. The signal levels must be at least ± 5 volts and preferably ± 12 volts. The levels swing around zero so as to give a mean voltage of roughly zero volts. This technique helps prevent charging up of long lines, reduces cross talk and gives a low noise level. The transmit and receive serial data are on 2 lines the remainder of the lines are concerned with controlling the flow of data and controlling modems in terms such as ring detect and ready to send handshaking. Fortunately not all of these lines have to be used and many modems are controlled with just three wires (transmit, receive and ground) the handshaking being performed in software by XON/XOFF protocols. The connector for the serial port is a standard 25 way male D connector and the lines implemented by the ST are as shown in the following table.

PIN FUNCTION COMMENTS

1	Grnd	Protective ground
2	TxD	Transmit data
3	RxD	Receive data
4	RTS	Ready to send
5	CTS	Clear to send
7	Grnd	Signal ground
8	DCD	Data carrier detect
20	DTR	Data terminal ready
22	RI	Ring indicator

Null modem

A null modem cable often causes confusion, all it is, is a cable that allows two computers to be connected together locally but each computer thinks that it is connected to a modem. Such cables are readily available, inexpensive and allow at least 10 metres separation between the two machines.

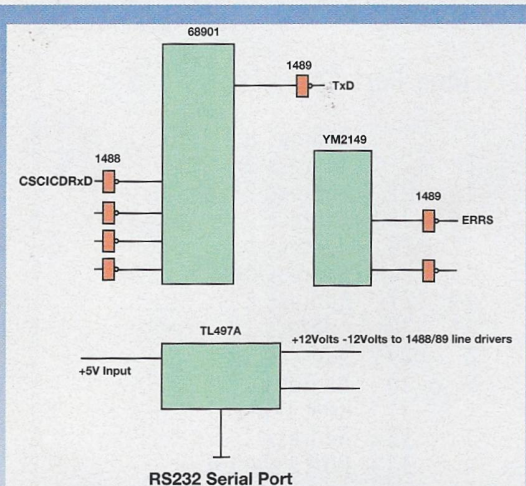
To wire up two cables for 25 way D connectors use this chart. Use a good quality screened cable, hook the two computers together and off they go.

DB25

7
2
4
6
3
5
20
Grnd

DB25

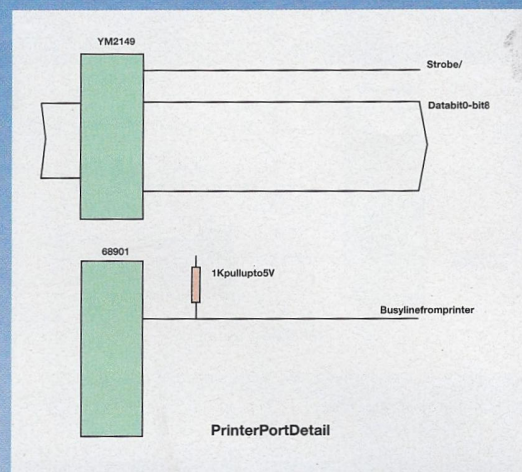
7
3
5
20
2
4
6
Grnd



RS232 Serial Port

How the ST produces true RS232 signals

The main serial port in the ST does not use a dedicated UART but utilises one built into the MFP 68901 controller chip. The 68901 chip gives off standard TTL logic levels (less than 0.4V and greater than 2.4V), these have to be converted into ± 12 V signals. To do this the ubiquitous 1488/89 chips are used, these rugged converters take the TTL and produce true RS232 levels. To drive the converter requires plus and minus 12V, the plus 12 is from the main power supply, the negative is derived from a small DC-DC oscillating converter, a TL497A.



Printer Port

The printer port is a standard Centronics parallel port using an industry standard 25 way female D connector. The port has 8 data lines, a strobe line and busy line to allow handshaking. The parallel port can send data at up to around 500KB/s if driven directly but considerably less if driven through the BIOS routines.

The Yamaha chip provides the data lines and the strobe line, this strobe line tells the printer that the data on the data lines is correct and to clock them into the printers buffer. The busy line comes from the printer into the MFP 68901 chip where it produces an interrupt if raised. Whenever the printer is unable to accept data, either because its off line or its buffer is full it raises its busy line to prevent any more data from passing.

Unfortunately the lines from the Yamaha chip go directly out and are not buffered, if the printer has low value pull ups installed (say 1K ohm) then the Yamaha cannot pull the lines down enough when driven low resulting in data corruption with some printers. The cures for this are numerous:

- 1 Remove the pull ups inside the printer (tricky)
- 2 Add a buffer chip to the ST internally
- 3 Add a buffer chip externally in a small box.

Interestingly this problem often gets worse when the ST gets hot after a lot of use or on hot days, this is because the logic low output threshold becomes worse when the chip gets hot.

One advantage of not buffering the lines is that the port is fully bi-directional, the Yamaha chip is easily programmed to accept data as well as send it out, this is of little practical use nowadays but can be used with good effect for remote controllers and similar devices.

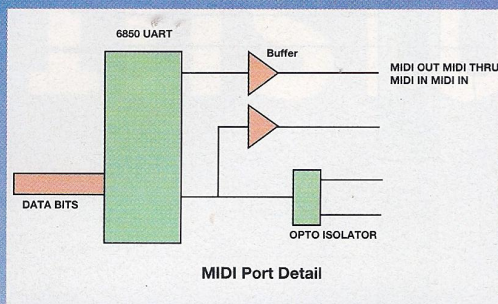
Mainly due to the lack of buffering the printer port is quite vulnerable electronically, any nasty spikes on the lines go directly into the Yamaha and the MFP chip usually resulting in an expensive repair charge. If the printer stops working try sending a plain text file from the desktop without the printer attached. If the printer thinks it has printed and the busy bee disappears then is likely the MFP has been blown, if the bee never disappears with the printer connected and on line then the Yamaha is the best bet.

How the printer port works

Each byte of data to be sent to the printer is loaded into the Yamaha chip by a control line from the GLUE chip. The data then appears on the output port. After the data has had time to settle the state of the strobe line is changed momentarily to signal to the printer that the data is correct and ready for loading into the printers buffer.

If at any time the printer wants to stop data being sent it put the BUSY line high which signals to the MFP chip to interrupt the ST and stop data being sent.

MIDI ports



The ST's MIDI implementation.

The inclusion of MIDI ports as standard was responsible for the ST being such a success with musicians the world over. Even now, hooking up proper MIDI ports to a PC can be a daunting task. The MIDI idea was to be able to control a set of musical instruments by means of a single serial loop, with most manufacturers adhering to the standard simple operation was assured.

The MIDI standard is a modification of a RS232 system, the signals are serial and sent in packets (identifying which instrument and what is it to do) at a fixed rate of 31250 baud with a format of one start bit, eight data bits and one stop bit. The signal is sent as a current loop this gives a system almost insusceptible to noise yet easy to construct.

The serial signal is produced by a conventional UART (a 6850) clocked at 500KHz and the serial output is buffered and fed through a 220 ohm resistor to produce the required current of roughly 5mA. The received signal back from the instrument is connected into an Opto isolator to ensure plenty of isolation and to prevent ground loops.

The MIDI port can be damaged due to the buffer on the output side, if this device is blown the ST will refuse to boot as the power on reset facility goes through another portion of this buffer chip.

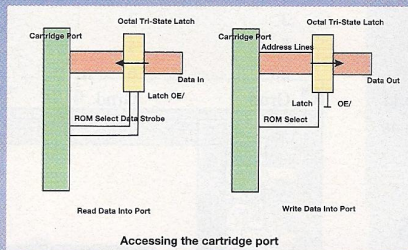
Cartridge port

The cartridge port, a 40 way 2mm pitch edge connector socket, was originally intended for software cartridges, these would offer virtually instant loading, a saving on memory and protection against copying. Unfortunately only one company produced software in cartridge form, Computer Concepts with their Fast Basic and a plug in 'Back Pack' desk accessories cartridge.

The main problem was the restricted address space of only 128KB. Even though the slot wasn't used for its main purpose very often it was still a very convenient access port for other purposes, scanners, dongles and real time clocks all found a convenient home here. Cartridge port expanders are available to allow multiple cartridges to be plugged in simultaneously, these also help prevent wear and tear on both the cartridges connectors and the port itself which is very difficult to replace.

As the port goes directly onto the processor data and address lines any nasty voltages can damage the ST immeasurably, an ill-fitting or worn cartridge can wobble in the port and easily short out two adjacent pins halting the ST instantly though usually non fatally.

The 5 volt power lines are taken directly to the port and in the STFM and STe are not protected, a current in excess of 3-4 amperes can be drawn which could be a hazard, the TT and Mega STe have small 2A in circuit fuses which are easily blown to protect the port and power supply.



Programming

For experimenters the cartridge port offers a marvellous port for control purposes, it gives a wide range of addresses, 16 bits of data and best of all a 5V power source. The control of the port is by the GLUE chip, any read access to the area of memory occupied by the port (hex

FA0000 to FBFFFF) generates a ROM select signal and a Data Strobe signal, any data on the port at that time is read in.

Any attempt to write data to the port however is trapped by the GLUE circuitry and generates a BUSS error and 2 bombs. To get around this problem a dummy write is required, the data to be written is placed on the address lines and a dummy read performed, any circuitry that requires data from the port thus decodes the address lines at read time. This form of control allows very simple circuits to be made and attached to the cartridge port such as ADCs and simple instrumentation systems.



Inside

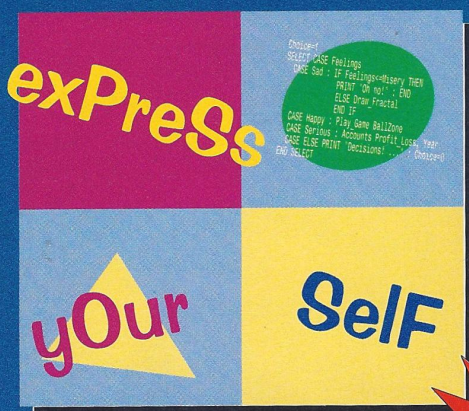
out

Cartridge Port Connections

1	5V	21	Address 8
2	5V	22	Address 14
3	Data	14	23 Address 7
4	Data	15	24 Address 9
5	Data	12	25 Address 6
6	Data	13	26 Address 10
7	Data	10	27 Address 5
8	Data	11	28 Address 12
9	Data	8	29 Address 11
10	Data	9	30 Address 4
11	Data	6	31 ROM select 3
12	Data	7	32 Address 3
13	Data	4	33 ROM select 4
14	Data	5	34 Address 2
15	Data	2	35 Upper Data Strobe
16	Data	3	36 Address 1
17	Data	0	37 Lower Data Strobe
18	Data	1	38 Ground
19	Address	13	39 Ground
20	Address	15	40 Ground

Atari World and HiSoft Present...

HiSoft BASIC 2



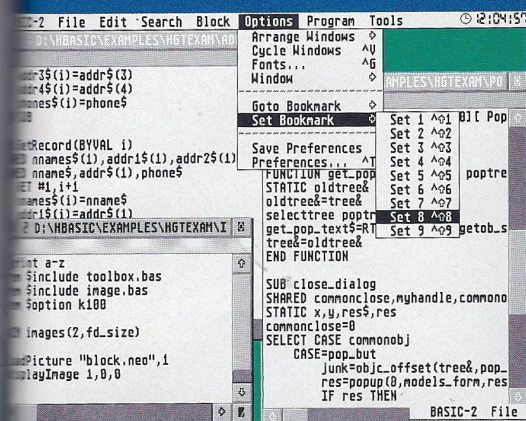
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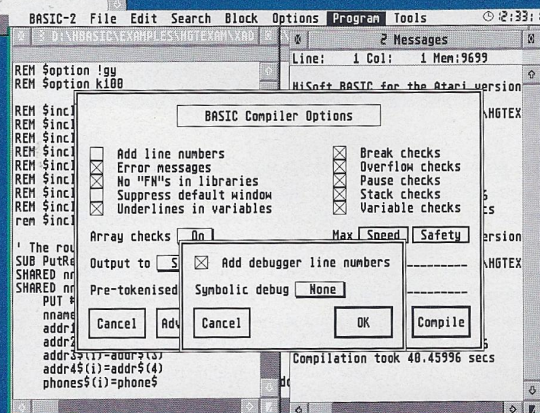
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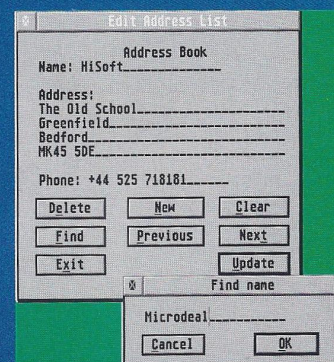
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Your eyes only

Using a graphic user interface has become second nature for most of us but pro musician Reg Webb reckons they're useless! **Joe Connor** explains...



Reg can enter text into his Falcon via the serial port with the Braille and Speak machine faster than I can type directly at the keyboard!

Reg learnt to play piano when he was seven years old and has been playing music ever since. I've seen him play gigs in and around Colchester for well over a decade but it came as a surprise to find out Reg has worked with many a household name. He's played sessions with Shirley Bassey, Paul Harcastle and Michael Ball plus a mixture of sessions, gigs and tours with Nik Kershaw, The Outfield (whose album *Play Deep* went double platinum), Suzy Quatro and most recently Lenny Kravitz. Reg has also enjoyed a long term collaboration with Robin Trower over three albums.

Recently Reg decided to upgrade his home studio with the intention of setting up a direct to disk recording system. Reg hadn't owned a computer before but had heard good things about Cubase Audio and the choice of a 14Mb Falcon with 2Gb SCSI hard disk to run it on was of secondary importance.

It was supplied by System Solutions with all the necessary audio mods and paid for with a grant from the 'Access to Work' scheme. You and I would give a lot for a system like that but to Reg the Falcon's interface with colour icons and superb graphics is completely irrelevant - he's been completely blind since the age of one. For Reg, a graphic user interface is more of a hindrance than a help!

Back to basics

Back in the dark ages when computers were controlled by simple command lines, blind people could hook up a voice synthesiser and hang out with sighted people on more or less equal terms but the advent of graphic user interfaces (GUIs) has changed all that, the emphasis on windows, icons, menus and pointers means blind people can't get a look in, er I mean, were left out in the cold.

Enter stage left Antony Aldridge, a

Music Technology lecturer at Goldsmiths College, University of London who was confronted by a blind student requiring access to Notator/Cubase back in 1993. He set out to create a non-graphical user interface for TOS so that blind people could operate GEM applications. The result is *Metaphor*, a software application that offers keyboard control and audio feedback from a speech synthesiser. Reg uses the non-Atari specific Apollo speech synthesiser plugged into the serial port.

For sighted people using a computer with *Metaphor* active is an odd experience. Normally selecting 'Open file' in an application displays the file selector but under *Metaphor* there's nothing to see! Instead *Metaphor* announces the details with it's curious electronic turn of phrase 'File, Open, C colon backslash star dot star' followed by each entry in turn. It's slow but workable and certainly energy efficient because unless someone is helping Reg set up macros or trying to



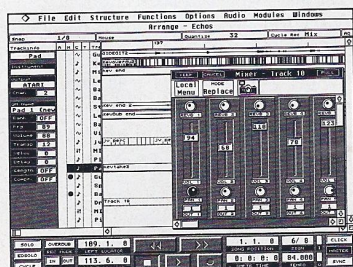
figure out what's fouled up, the monitor remains turned off!

Just like sighted people Reg uses the files and folders metaphor but instead of visualising them he's remembering how they feel. Beyond arms reach Reg is in a world of memory, unless he's actually touching something he's remembering it - sighted people can still look at objects beyond their touch.

Input

Rather than type large quantities of text at the keyboard Reg uses a handy gadget called Braille & Speak, manufactured by Blaze engineering in Maryland, USA, which is a blind persons equivalent of a Psion organiser. Text is input using combinations of six keys and a space bar. Text can be read back as it's entered along with a host of other useful functions including speaking clock, calculator and stop watch. Compared with the Braille version of the OED, which comes in 16 large volumes the size of a phone book, it's a marvel. Then Reg mentioned the serial port and we started thinking...

A few cables, adapters and gender changers later we had the Braille & Speak connected via the serial port to the Falcon and running a copy of Connect it was easy to capture the ASCII text and squirt it straight into Everest via the Clipboard for GDOS output using any available font.



Metaphor offers complete control over Cubase Audio so other applications should be a doodle!

If your sight fails you can trade-in your Psion organiser for a Braille & Speak machine - seven buttons of throbbing raw power!



Reg received a gold disk for his work on Lenny Kravitz's album Mamma Said.

With some experimentation and a smattering of macros, it should be possible to prepare formatted text in any word processor.

Because Metaphor macros depend on options in dialogs remaining in fixed positions they're susceptible to changes in the interface between versions. This obviously isn't ideal and the way forward probably lies with applications programmers who could easily add hooks for software like Metaphor to latch onto. In the States government departments have already fallen foul of anti discrimination laws which outlaws software which is inaccessible to blind employees. The times they are a changing...



Metaphorically speaking?

Metaphor is non-graphic user interface application, created by Antony Aldridge, which runs on any Atari computer and acts as an alternative to GEM.

Although most GEM applications can be navigated using Metaphor directly Antony has developed a macro system for tricky programs such as Cubase Audio. Not only does Cubase Audio feature a highly graphics intensive interface but it also uses customised screen output routines.

Metaphor macros are things the computer has been taught explicitly, for example the position of the mouse pointer on the screen. Simply creating a list of mouse positions isn't very practical. Whilst sighted people can easily scroll a list for the desired entry a voice synthesiser has to read each and every entry for a blind user. To avoid lengthy lists of choices for the user macros are organised into groups which can be enabled or disabled depending on the current dialog or recognised text. Simple optical character and graphic recognition is used to determine the status of screen objects, read text etc..

Output from Metaphor is directed to the serial port using any compatible external voice synthesiser. Pressing the Alternate+Help keys activates Metaphor's input mode which then accepts commands from the keyboard or, for seriously motor disabled people, via an optional switch control device plugged into the joystick port.

Metaphor uses its own metaphor to help users navigate the system. Imagine a multi-storey building, each floor has a

similar layout comprising a foyer leading to a corridor with a row of doors. Each door is a menu option which can be opened, passed or knocked on for help. Opening a door either leads to another corridor or a Room containing a function such as 'Run a program'.

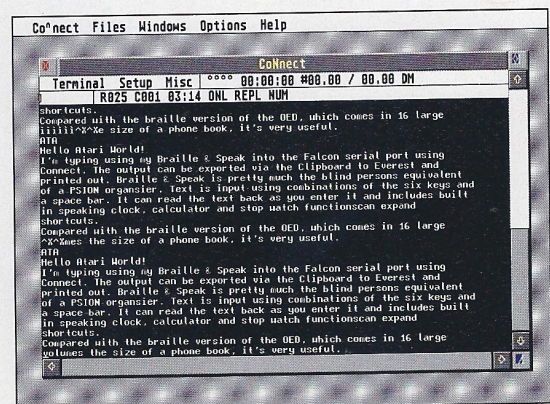
All the main controls are mapped to the cursor block which makes it very easy for blind people to find and use. The Help key reads aloud any help text associated with that function, the Undo key returns to the foyer, the Insert key means Yes, Ctr/Home key means No and the cursor keys move left, right, up and down as you'd expect.

Each task has its own floor. For example, if you're editing a document on one floor and need to configure your output device then return to the foyer (press Undo) go to the relevant floor, reconfigure your printer, return to the foyer then return to the original floor and continue editing your document.

A Metaphor specific floor, called the Library, is always available and includes functions for loading text documents, setting up the voice synth and basic desktop functions.

The current Metaphor development version allows a Falcon or TT connected to another computer running Windows, Mac OS, X Windows and other computer to act as the user interface. Using artificial intelligence external screens can be decoded via a hardware add-on which acts as the keyboard and mouse driver, all clever stuff!

Metaphor is recommended by the RNIB for use by professional musicians and studio engineers.

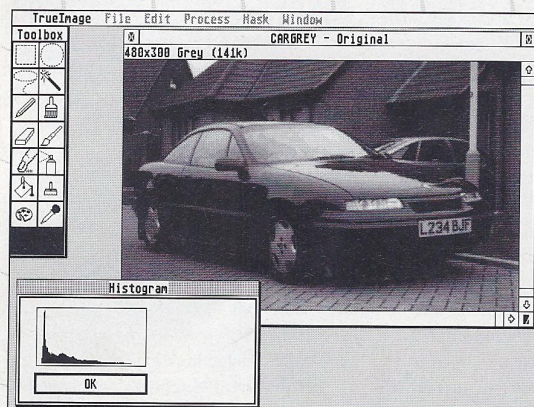


Connect can capture the output from Reg's Braille & Speak which can be easily exported into other applications via the Clipboard

In input mode Metaphor is controlled using the cursor block which is straightforward and easy to find

Masked raider

In the second part of his image processing tutorial, Gunter Minnerup introduces the basic adjustments needed for most scans and reveals the secrets of the mask...



A typically mediocre scan with all the typical faults of darkness, poor distribution of highlights and shadows, and some fuzziness. We'll soon sort it out!

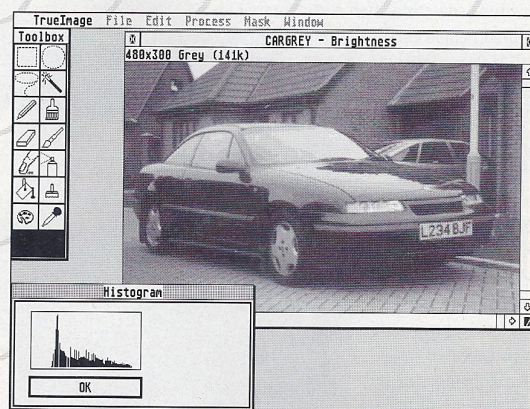
Although quality images can now be obtained from many different sources, including public domain libraries, bulletin boards and the free cover disks of many computer magazines, the scanner remains pretty much the main source. Once a luxury item strictly for the "money no object" setup, scanners have fallen in price so much that they are today affordable for almost anyone with an interest in computer graphics and desktop publishing. They are far from perfect, however, especially at the budget end of the market, and one of the primary functions of image editing software is to compensate for the loss of image quality involved in the scanning process.

Dark and dull

The ordinary CCD scanner as found on most desktops works by reading the reflections of the light cast onto the original artwork, and it stands to reason that some loss of brightness is inevitable in this process. The scanner's own software may well allow you to compensate for this by scanning at an artificially increased brightness level, but I prefer to do my scanning at a neutral setting and then do everything required to bring the scanned image up to scratch in one go using my image editing software.

Apart from being too dark, most scans also lack sharpness: again, an inevitable result of the physical processes involved and often made worse by the existence of

The first step is to increase the global brightness of the picture. Some of the details in the shadowy parts are only becoming visible now. Note the effect on the histogram in the bottom left corner of the screen.



a thin layer of dust or grease on the scanner's glass surface. Colour scanners present their own, far more intractable problems, but we shall leave those for a future instalment of this series.

Most image editing programs provide for simple adjustment of the brightness and contrast values by means of a slider. The tricky bit is to judge how much to adjust these values by. As far as brightness is concerned - and ignoring the tricky issue of the monitor's adjustments and ambient light conditions at your workplace - the general rule is to lighten the images a little more than appears necessary to the naked eye. The reason for this is that all

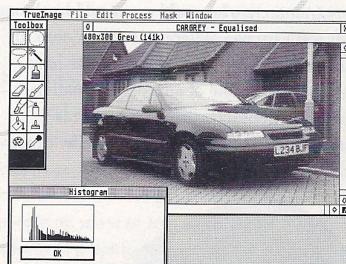
printing processes will once again darken the picture and you need to make allowance for that. A few sample printouts compared against the original artwork will soon give you a feel for the rough amount of brightness correction necessary.

The equaliser

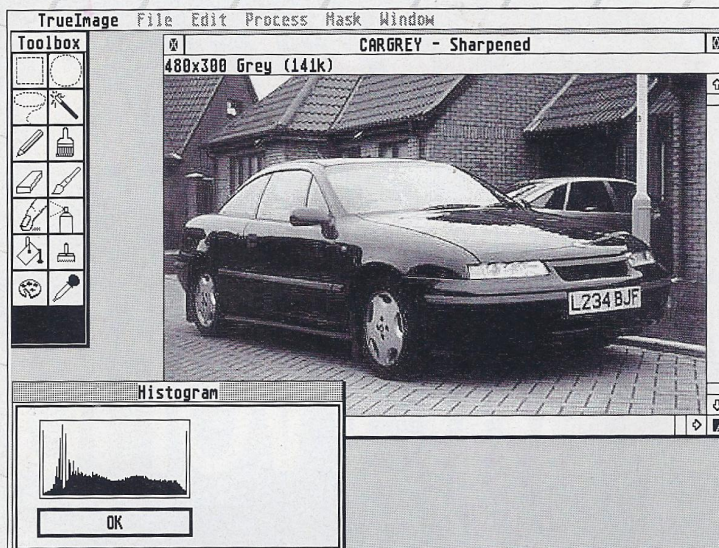
Many images also suffer from poor distribution of highlights and shadows. Even the most elementary image editor will feature a Histogram function which displays the distribution of highlights and shadows in the form of a simple graph: the horizontal axis representing the brightness values, the vertical axis the number of pixels of those values.

If the histogram for your image appears bunched on any part of the horizontal axis, it is probably too dark, too bright or too dull. Time for the Equalise function, another standard feature of all image editing packages I know of, to spread the brightness values out a bit and often improve the definition of fine detail to a significant degree.

The contrast slider should be used sparingly, though, as any significant adjustments in either direction tend to reduce the amount of visible detail. No harm done in playing around with it a bit,



The Equalisation filter helps distribute the brightness values over the picture, further enhancing detail and taking away dullness in the middle values.



The most evident effects of the sharpening filter is on the number plate and the brickwork of the houses and road surface. It's like a net curtain had been drawn!

especially if your software allows you to preview the result before recalculating the actual picture, but in most cases the Sharpen filter is the one to go for instead to combat the fuzziness of your scans.

The Sharpen filter works by analysing each pixel in relation to the neighbouring ones, and emphasising the differences in brightness between them to bring out delicate shapes and edges. If you overdo a global sharpening, some parts of the image may develop squarish blotches which will then have to be selectively treated by the opposite function, Smoothen or Blur.

But how do you apply a filter such as Sharpen and Smoothen selectively to certain parts of the image only? The answer is to mask out those sections which you do not wish to be affected by the filter. The ability to apply such selective treatment is the main reason why I do not bother to fiddle much with the brightness and contrast settings in my scanning software and prefer to leave them fairly neutral, as any such adjustments will always affect the entire image globally and the reality is that most pictures need differential treatment.

Magic wand

Applying a mask is one of the most basic skills of image editing. The most obvious approach is to manually trace the required picture portions using the masking tool, but this is all but impossible to do accurately with complex images involving a lot of different grey values. Most programs therefore offer a "magic wand" to simplify the process: you just click on a specific point in the picture, and all parts with identical or similar grey (or colour) values will be masked automatically.

Great in theory, but in practice you will find that the magic wand often

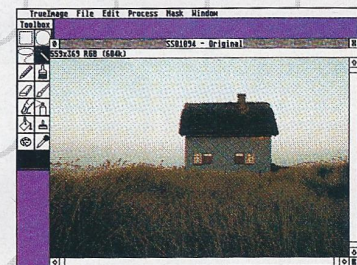
overshoots the required area as the same grey values can often be found in unrelated parts of the picture background. For this reason, it is usually best to erase those unwanted parts before applying the magic wand: you can always save your mask to disk, reload the original picture and then reload your mask into it.

A very useful little trick is to use the brightness and contrast controls at rather extreme settings in order to simplify the definition of the mask by reducing the number of subtle grey shades visible in the monitor image temporarily. The same principle can be applied to colour pictures by converting them into greyscale images before masking: up to 256 greys are much easier to handle with the masking tools than 16 million colours!

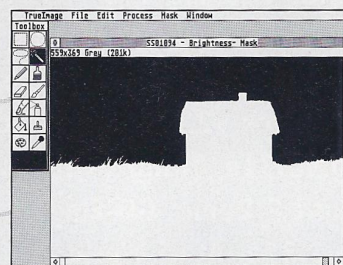
The combination of brightness adjustments, equalisation, sharpening and smoothening, especially if applied selectively, will quickly turn your mediocre scan into an acceptable photographic image. If you do not need the entire image, you can also use the mask to erase unwanted background, or to copy selected parts to the clipboard and then paste them onto another background picture. Portraits and landscapes, in particular, often benefit from this treatment. You are now ready to embark on more ambitious manipulations - more about those next month.



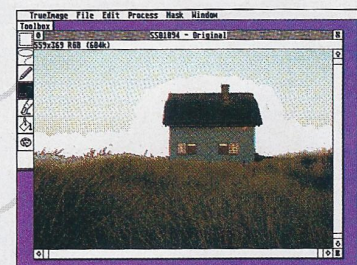
To help mask out the background sky, this image has had its contrasts enhanced until the sky is down to one uniform value, easy to pick out with the "magic wand" tool (highlighted in the toolbar on the right).



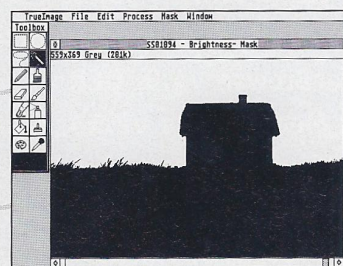
The mask defined in the greyscale picture has been saved to disk and the colour version of the image loaded to have the same mask applied to it.



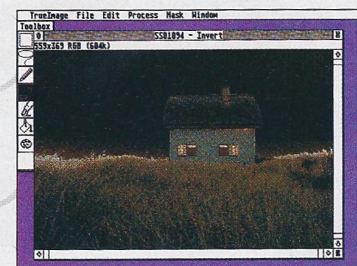
In TrueImage, the mask is normally only visible as a thin outline around the masked area, but it can also be displayed in simple black-and-white.



As you can see, the eraser tool can now be used by even the most ham-fisted operator without fear of losing any of the protected image areas.



Once defined, a mask can easily be inverted to protect everything outside the originally defined area against editing operations and global filter effects.

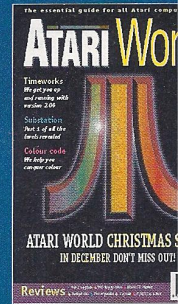
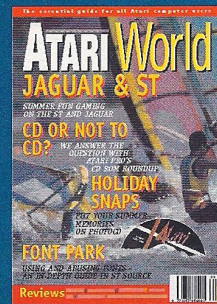
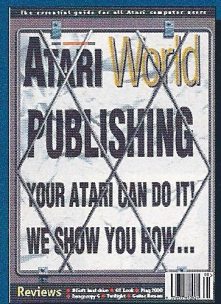
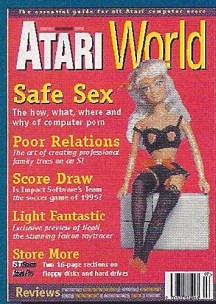
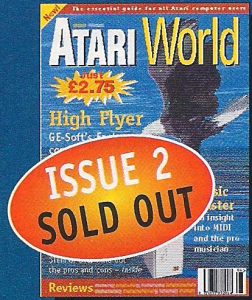
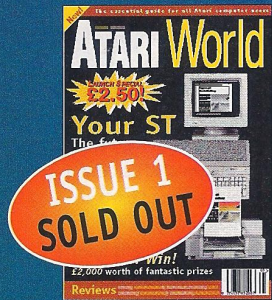


Or, alternatively, the sky colours can be inverted to give a good foundation for further development into a faked night-time scene.

Readers Disk &

... for your collection

ATARI World



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- **Issue 2 (2 Disks)** Speed of Light v3.8, Bootsie v1.74, World Clock v1.0a, GDOS-Check v2.0, Maus-Window v1.32, Duet v1.0e, Vericard v1.0, Thing v0.31e, Thing Utilities, Atari World Profile.
- **Issue 3 (1 Disk)** Thought 2 Demo, GD-Flag v1.15, IdeaList v3.6, Fastcopy III, Kivi v1.37a, Atari World Profile.
- **Issue 4 (8 Disks!)** Address v2.2, AVFM v1.0, LED-Panel v3.1, Mouse23 v2.3, Atari World Profile, Turtle v3.2, Timeworks 2.01.
- **Issue 5 (1 Disk)** ImCon v1.1, InsChar and InsDate, Let 'em Fly! v1.3, MasterBrowse v4.9, OCR v1.4a, Text Analyzer.
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- **Issue 7 (1 Disk)** Marcel v2.3, Kandinsky v2.02, Dirsort v1.1, SMF-Player, TWP HS-Modem v6, Disk Cake v2.1, Atari World Profile
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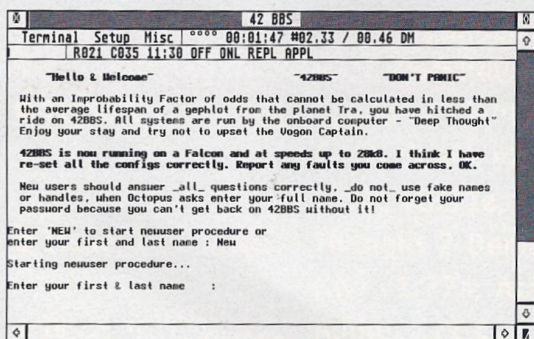
Let's communicate



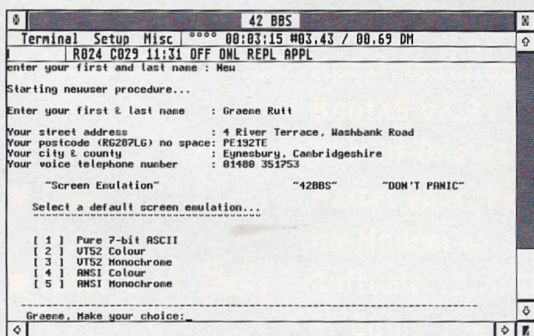
Life, the Universe, Everything?
Graeme Rutt reckons the answer
might be... 42 BBS.

Last month we took a quick look at Atari terminal programs. This month I'll be devoting most of the space to the things you'll be connecting them to - bulletin board systems (BBS). Your first steps on a BBS may well be problematical. You're entering a world with its own language and customs and you don't even know the lie of the land. Tough, huh? Well, no, not really. There's plenty of help to be had from that friendliest of species - the sysop - and I'll be doing my own bit by providing a map.

For the purposes of this cartographical lesson I've chosen the 42 BBS, a prime example of straightforward BBS layout (and not unnaturally this issue's BBS of the Month) run by Colin Fisher-McCallum. While no two boards are identical, the principles outlined below should stand you in good stead for any bulletin board you log into.



screen. Hit a key and you'll be escorted to the log-in screen proper.

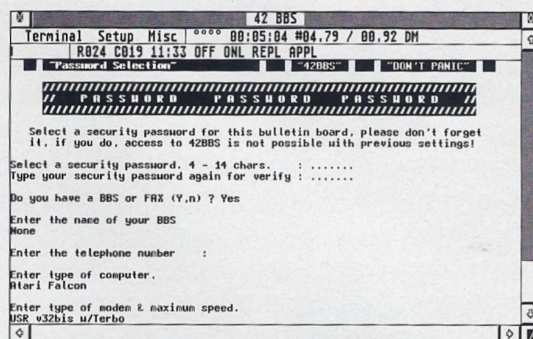


the board. You'll also be asked which terminal emulation you're using - make sure you choose the right one.

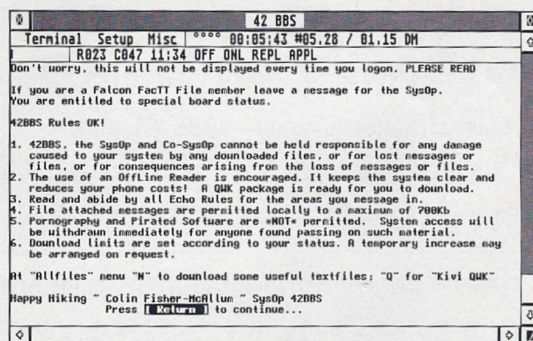
Logging In

Okay, you've set up your terminal package and you've dialled the number - in this case 01256 895106 - the first thing you're liable to see is a request to hit 'Esc' or 'Escape'. A few seconds after that you'll see some kind of welcome

Time to enter your name, type in 'NEW' and follow the prompts. Here you enter your personal information. Some sysops use this information to confirm that you're a 'real' person - most often by giving you a quick telephone call to welcome you to



Next we come to the all important password. What you use is totally up to you but try not to make it too obvious (such as using your log-in name) or too difficult to remember (such as using a random string of punctuation characters!). If you're paranoid about your password then use a word which isn't in the dictionary, for example, 'haggis2eat' rather than plain 'haggis'.

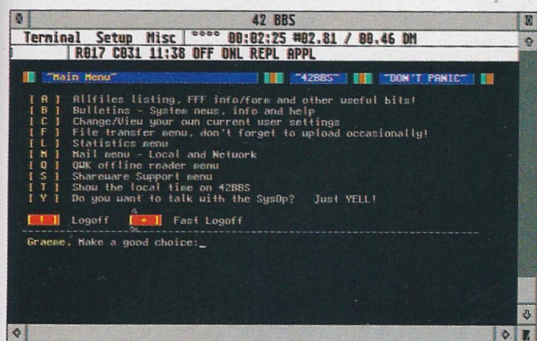


After a few more questions you're finally shown the BBS Rules. Although it's easy to rush through these they're well worth a read. They are there to protect the sysop (and therefore his BBS) and to make the running of the board as smooth as possible. Now it's time to hit return and enter the bulletin board proper.

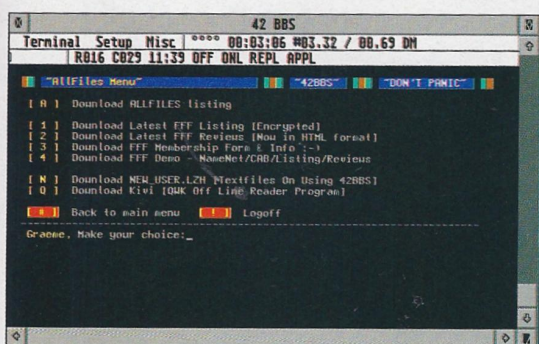
Getting Around

Bulletin boards are made up of menus, which lead to more menus or things to read or do. This 'menu tree' approach is very similar to the way folders and files are arranged on Atari floppy or harddisks.

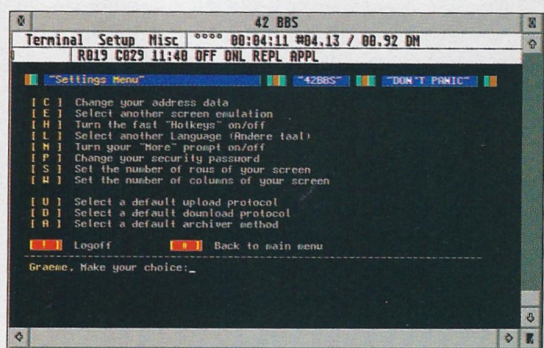
Below I'll be mapping out the 42 BBS on a menu by menu basis, you'll find that most other bulletin boards will use a similar system. To make things a bit easier you can hit '#' from any menu to get back to the main menu and '!' will log you off from just about anywhere.



At the root of the tree is the main menu. From here you can access any part of the bulletin board. On 42BBS Colin has also included a handy time page and the facility to request to talk to him ('Y'ell) from the main menu. We'll not be dealing with these or the shareware menu in this article - as the former aren't menus and the latter is 42BBS specific.

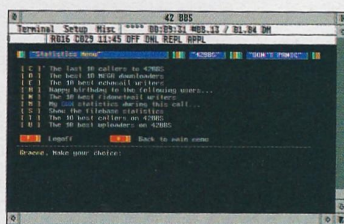


Menu entries 'A' and 'B' deal with system news, information and help. If you're new to a bulletin board then you should read these - especially the last - to find out what's going on and how to get in on it. As with the BBS Rules page, above, it's very tempting to ignore these areas but you'd be missing out on an invaluable source of information.

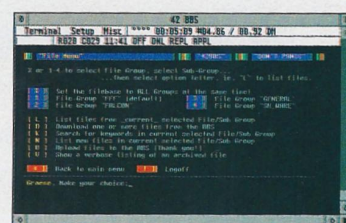
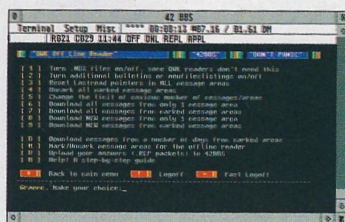


Entry 'C' deals with your settings on the BBS. You may like to select the download/upload protocols you intend to use (Zmodem is probably best), change your password or correct/amend your personal data. You should be careful to not experiment too much with the elements that handle display - it's all too easy to get to the stage where your entire screen looks like garbage.

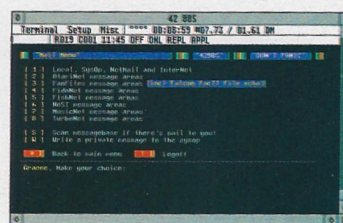
'F' is for - unsurprisingly - 'Files'. This is the area where all the tasty shareware and public domain programs live. This section is itself a menu which branches down further into different parts - each dealing with files of different types. Although you're free to get whatever you like you may find that the BBS imposes a daily limit. This is to stop 'troughing', the process of hogging BBS time to download everything in sight.



The next section is probably the most important on any bulletin board: 'Mail Messages'. This menu also breaks down into further menus, each dealing with a different message network. If you're not interested in reading/sending messages from/to other bulletin boards you should check out the local message areas - this is also the place to send private mail to the sysop or other users of the board.

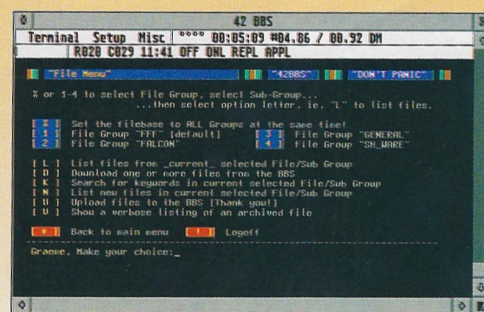


Most bulletin boards have a section which shows you statistics such as most popular download, best message writer, worst trouging offender and so on. The 42BBS is no different and you can get at them from this menu.



If you've read the BBS Rules you'll have seen that the sysop prefers you reading and replying to messages off-line, using an off-line reader. This menu enables you to set up the QWK system - for which you'll need a QWK reader program, available in the Files Area. This is an area which would take a whole article on its own to explain, so I won't go into details here but thankfully Colin has provided a guide, just hit 'H'.

Web Site of the Month

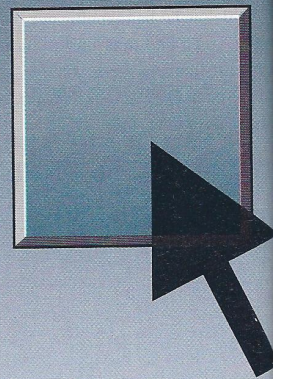


Yes, at last, after all this time Atari finally have a web site of their own. Sadly it doesn't deal with Atari computers but if you're a Jaguar owner you're in for a treat.

The address is: <http://www.atari.com/>



Never mind the language



Advanced form filling? Not a course for bureaucrats but the subject of this month's programming article by Jon Ellis...

User input into
dialogue boxes needs
analysis

Last time we looked at the basics of displaying and animating dialogue boxes for user input. These actions on their own are of little use unless the program can detect what the user has done, and act accordingly. Take a moment to think - what is the purpose of a dialogue? One view might be that it allows the user to change the values of variables within the program in a friendly and understandable fashion. You could maybe even think of the fields within a dialogue as being visual metaphors for variables.

Different types of dialogue box object relate naturally to different types of variable. At the simplest level, a selectable button mirrors a flag (or boolean) variable - it's either selected (TRUE) or not (FALSE). Text fields may be connected to string variables, or even to numeric variables via a conversion routine. Radio-buttons, or the more compact pop-up menus available in recent versions of TOS fit best to integer variables holding small numbers; maybe denoting different modes of program operation.

Before a dialogue box is displayed, the object tree should be updated to reflect the state of the associated variable. Possible C code fragments to do this for a selectable button, a G_STRING

related to a string variable and a G_FTEXT related to a numeric variable might be:

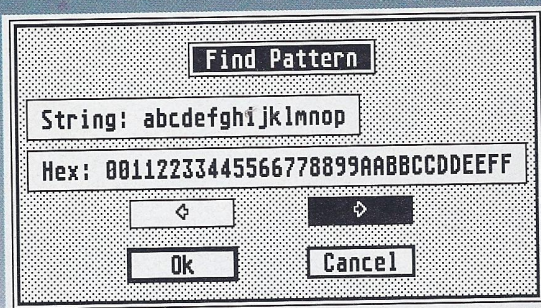
```
if (flag == TRUE)
    (box+OBJECT_INDEX)->ob_state |= SELECTED;
else (box+OBJECT_INDEX)->ob_state &= ~SELECTED;
strcpy((box+OBJECT_INDEX)->ob_spec, string);
tpttr = (TEDINFO *) (box+OBJECT_INDEX)->ob_spec;
sprintf(tpttr->te_ptext, "%d", number);
```

After the interaction, if the user selects a Cancel button, the program has to do nothing before continuing. Any changes made to the dialogue box will be lost when the box is reinitialised prior to its next display.

Of course, if the OK button is selected, changes made by the user will have to be copied back into the related variables. This is usually just as simple as the initialisation process. For the examples given above, suitable analysis code might be:

```
if ((box+OBJECT_INDEX)->ob_state & SELECTED)
    flag = TRUE;
else flag = FALSE;
strcpy(string, (box+OBJECT_INDEX)->ob_spec);
tpttr = (TEDINFO *) (box+OBJECT_INDEX)->ob_spec;
sscanf(tpttr->te_ptext, "%d", &number);
```

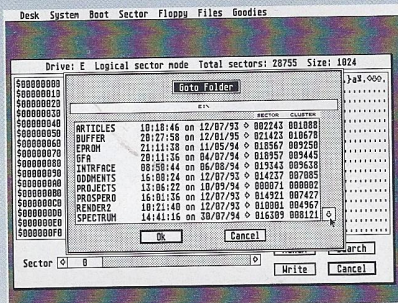
A hint born of bitter experience - if you work in C and want to use strcpy() to move data between string variables and entries in the resource data, always make sure that you allocate enough storage space in the variable and in the resource file to cope with the largest conceivable input. Get this wrong, and you risk corruption and a crash.



Using placeholders makes sure your resource strings are the right length.

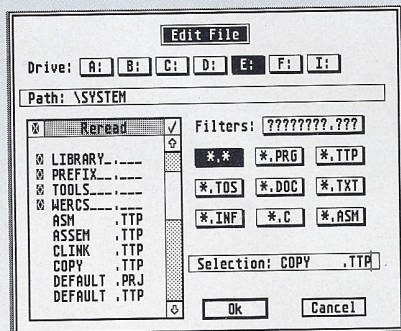
Background briefing: animated dialogues

If your program needs dialogue box elements more complicated than the simple selectable buttons, text fields and radio-buttons provided by GEM, then it's up to you to design them and animate them. To be sure, some of the fancy interface tricks used by modern applications require a rewrite of the AES form_do() routine, but you can do a lot without going this far.



Use some imagination in designing dialogues.

Take for example a scrolling list box, like you might find displaying the names in a replacement file selector. This can be done without any fancy hacks, using only standard GEM objects.



Looks complicated? It's all standard stuff really.

In this file selector, all the various control points of the list box are made up of G_BOXes, G_BOXCHARs or G_STRINGs, each with the TOUCHEXIT attribute. When they are clicked on during a form_do() call, control is returned to

your program immediately. The key thing to remember is that displaying a dialogue box and allowing the user to interact with it are two completely separate events. Therefore, your program can deal with the action requested by the mouse click while the dialogue remains open on the screen. When the work is done, simply execute another form_do() call, and the user can once again interact with the dialogue. If this is done quickly enough, it feels to the user like one seamless interaction.

This process is normally implemented by a simple loop, terminated when the user clicks on a 'real' exit object like the OK or Cancel buttons. An algorithm might look something like this:

```
call form_centre();
call form_dial() in the
FMD_START mode;
call objc_draw() to draw the
whole box; do
{
  call form_do()
  if return value has bit 15 set
  set a flag to indicate the user
  has double-clicked strip bit 15
  if clicked object was SCROLL_UP
  call do_upscroll()
  else if clicked object was
  SCROLL_DOWN
  call do_downscroll()
  /* etc etc */
}
while exit object is not OK or
CANCEL
  reset SELECTED bit in chosen
  exit button object
  call form_dial() in the
  FMD_FINISH mode;
```

Of course, depending on the object selected, you might need to update the appearance of the dialogue box. In the file selector example, this might happen if a scroll arrow is clicked on. All your program has to do is to update the relevant bit of the dialogue box object tree, and then redraw the screen to reflect the change using objc_draw(). Three top tips for keeping this process slick and quick:

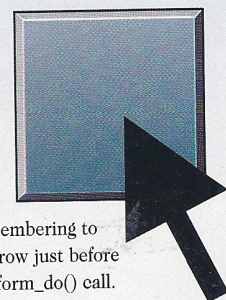
◆ Don't be tempted to redraw the whole dialogue box though, as it will cause a very annoying flicker. Use the x,y,w,h arguments of the objc_draw() call to confine the redraw to the smallest area of the dialogue box that has changed. If you need to find out the screen coordinates of an object, use objc_offset() to get the x and y values, and then read the width and height directly from the OBJECT structure.

◆ You don't have to always redraw starting from the root object of the dialogue box object tree. If the area that's changed is all contained within say an enclosing G_BOX, the redraw can often be started at that object. Experiment!

◆ Graphic objects like text are drawn much faster if their x coordinate happens to fall on an integral multiple of 8. This is a consequence of the architecture of the ST screen. Most of the time it's not worth fiddling with, but if you need to optimise the redraw routine to the limit...

Finally, if the work of interpreting the object selection takes some time, like reading a directory from a new disk, you should provide some 'explanation' to the user as to why the dialogue box is visible but their mouse clicks are having no effect

(because the program is not in a form_do() call). The time-honoured way of doing this is to display the busy-bee cursor while the program is busy; remembering to change back to an arrow just before the loop repeats the form_do() call.



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Public Arena

NEWS

News

Bitmap View IV, programmed by Christophe Boyanique, should appear this side of Christmas. Unlike the current release this version will work on any Atari compatible and feature GEM-View style external modules to load, save, dither and add effects to images. The modules are programmed by a French company called PARX Software.

Geneva 004 patch released

Existing Geneva owners can now download or order a copy of the Geneva release 3 to 4 patch from BBSs and PD libraries. There's also a separate Geneva 4 demo version available. Early reports suggest release 4 was worth the wait with many tasty new features.

InterActive

Kandinsky v2.03i is now available and features mono (v1.x) Calamus CVG import and export for registered users along with active support for the Freedom file selector. Other new releases include minor bugfix

releases for OCR v1.4b and CD-Player v1.3c and Address v2.03e.

Apex Viewers

Four new versions of the Titan/BSS Falcon image viewers are now freely available. These GTP programs are fast! Files can be viewed from the desktop or shell by double clicking on the image or by dragging the image onto the GTP file.

The ApexTGA viewer supports 16-, 24- and 32-bit compressed and uncompressed Truevision TARGA files and renders on screen using different methods depending which machine you're running. On the Falcon 16.7 million (24-bit) colour display is possible, the STe manages a respectable 32,768 (15-bit) colours with 4096 (12-bit) colours on a standard ST.

The other three viewers are Falcon only. The ApexJPEG and ApexGIF viewers support 16.7 million (24-bit) images and the FLIC animation viewer supports 70 frames a second (or higher) in 256 FLI/FLC format or 16-bit truecolor in FLH format.



Wash and go?

The morning after the release of the first Atari colour graphical WWW Browser was interesting. Peoples' experiences ranged from 'brilliant, it worked first time' to 'it trashed my hard disk partition'. And the underlying cause of such extreme experiences can often be found lurking in insidious configuration files. 'Ah, I wondered what those were for'.

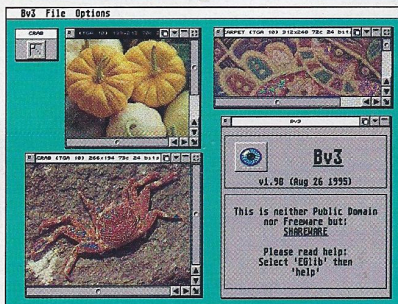
The WWW Browser isn't the only culprit with other recent releases such as HS-Modem, ST-Guide and Freedom all bulging with inexplicable options which assume we all know what to do with them. The time has come to call a halt! Separate configuration files? Not me, I just want to wash and go, preferably using a GEM interface.

There is (maybe) an end in sight. Both the ST-Guide and Freedom authors are planning point and click solutions and there's already a GEM front end for HS-Modem, although currently it's harder to understand than the TOS version -but at least they're trying.

In the meantime, we're left with no alternative but to read and edit the options carefully. Always work on a backup so you can return to the original setup and if you make changes which seem to be a backward step rename the configuration file to deactivate it. Most programs will either run using internal defaults, or politely inform you, if a configuration file is missing.

All the software (unless otherwise stated) can be sourced from:

Joe Connor

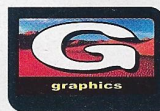


Fast image loading combined with the EGlib interface make a winning combination.



Bitmap View III v1.9

Shareware • Falcon (some TTs)



Bitmap View III is a file viewer with knobs on. The enhanced GEM interface uses the 'EGlib' library which

takes care of the look and feel, font and memory handling and it's the most stylish GEM front end I've seen.

Currently only the top end file formats are supported. GIF 87/89A images with between 2 and 256 colours and TARGA or JPEG files with between 256 colours and 16.7 million (8- to 24-bit) can be displayed. GIF files load roughly four times faster than Imagecopy or GEM-View and on a par with the lightning quick Apex

viewers. JPEG file loading takes advantage of the Brainstorm DSP decoder.

With several images on screen window management becomes important, iconify is supported along with a 'Mosaic' option which neatly arranges all the open windows to fill the screen. It's even possible to pan around and zoom images in real time!

Two features in particular grabbed my attention -and they'd be welcome additions to any Falcon graphics package. The first option leaves the first sixteen colours in the palette untouched which means your desktop doesn't chop and change colours as you load and select between different images and the second cuts of the monitor signal when loading images (the same technique is used by the TurboBlanker screensaver) enabling the main processor to speed up the loading of larger images.

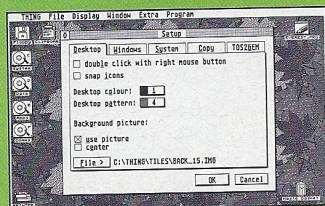
A separate slideshow utility, Bitmap Slide III, completes the package. Folders and sub-directories can be scanned for images and a nifty auto-zoom feature auto-sizes images to fill the screen. EGlib provides the online hypertext help which does the job but isn't as flexible or comprehensive as the ST-Guide system. Registration costs £10 which removes a random reboot on exit feature and five slide limit in slideshow utility.

JC



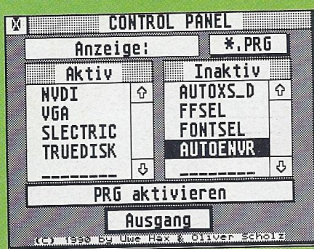
Thing Background Collection Vol 1

This collection of images has been carefully edited so when 'tiled' together to fill the desktop background you can't see the joins. With 46 different designs to choose from there should be something for everyone. They can also be used with Gemini and other applications which support the IMG format.



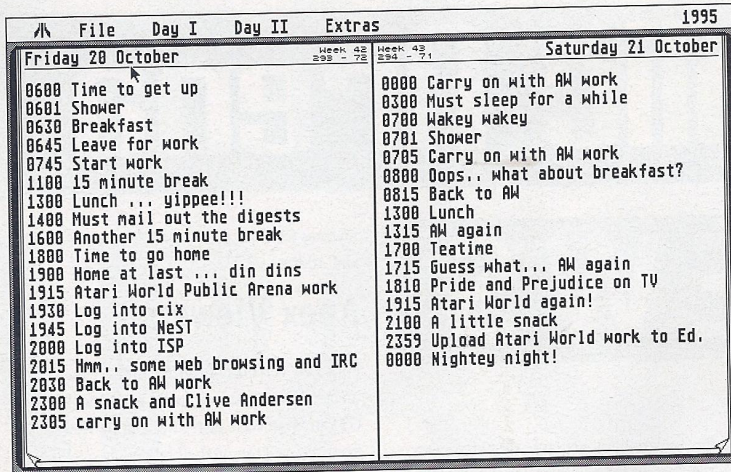
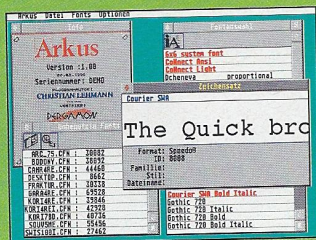
Boot CPX

This CPX provides an easy way to activate and disable Desktop accessories and Auto folder programs. Boot CPX is ideal for use on floppy based systems where the overhead of a full blown boot manager simply isn't worthwhile. After making the desired changes reboot your machine, even the German text is obvious, it really couldn't be easier.



Arkus

Arkus is a font manager for NVDI and SpeedoGDOS. Although this is a demo of a commercial program several useful features are available. All the installed GDOS bitmap, Speedo, TrueType and PostScript fonts are loaded and displayed in a scrolling fontname list. Selecting an entry displays a preview of the font along with the font ID and filetype.



Never miss an important appointment or that TV program with ST Diary.

ST Diary v1.6

Freeware • All Ataris



ST Diary is a comprehensive electronic version of a 'page a day' diary and unlike conventional diaries functions for more than one year, automatically adjusting for leap years. A standard double density disk will hold two years worth of ST Diary data.

You are presented with a screen which resembles an open diary showing two days,

with a pull down menu for each of the two pages. These pull down menus let you access and process the data stored in the diary. Annual events can easily be entered in, and you have access to an eight page notepad. Other options include browsing through the diary a page at a time and jumping to a specific date.

Like conventional diaries, ST-Diary comes with a calendar and a conversion table for various units and time. This one even comes with a glossary of computing terms! ST-Diary requires ST high resolution to work.

DE

Ruftrade may look like a dog's dinner but the results are the cats whiskers.



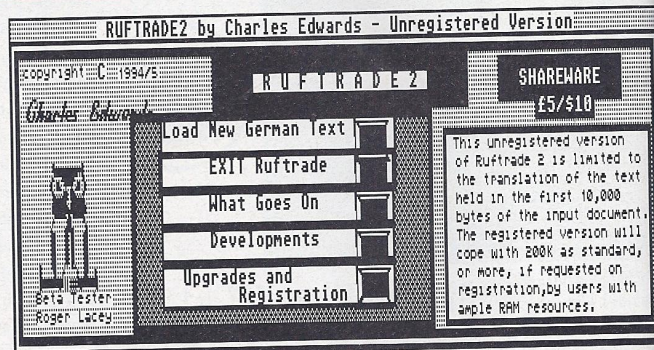
Ruftrade v2.1

Shareware • All Ataris



Sooner or later every Atarian encounters German documentation because that's where most of the good software comes from. Armed with nothing more than a copy of Ruftrade you can save yourself a fortune on German evening classes! Don't be fooled by the front end, Ruftrade is an Atari World Beater in disguise! Treat the interface in the same spirit as a trip to the dentist, a necessary evil.

Ruftrade started life just like other brute force word substitution translator but programmer Charles Edwards realised that despite the dictionary size growing by over 25% since version one the 'hit' rate wasn't



increasing at the same rate. Even though Ruftrade's internal dictionaries are highly targeted the key to improving the hit rate lay elsewhere.

Charles began adding intelligent features and Ruftrade now looks for plurals, words split across two lines and 'root' meanings within unrecognised words and the hit rate is climbing again. The next step was to replace 'sense destroying' word sequences with suitable alternatives and finally to rearrange the word order for some common verbs which improves the readability. Charles reckons if you're trying to get your head round a translation less mental gymnastics should result in improved understanding. The unregistered version has a 10,000 word limit (the translated text is simply truncated).

Ruftrade is the only intelligent German to English translation software available on the Atari platform and at only £5 it's a real rough diamond.

JC

FFF October 95

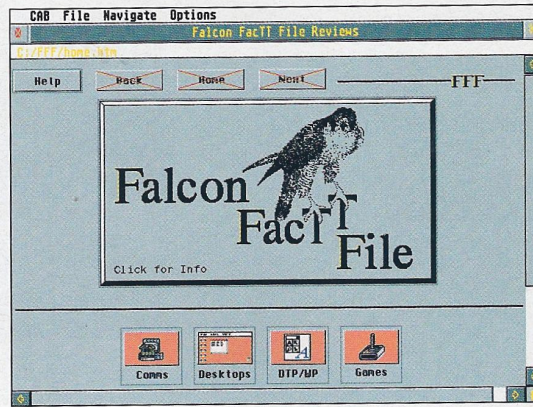
All Ataris



Although primarily aimed at Falcon Fact File members the latest FFF magazine is always available for download from 42BBS on 01256 895106 and other BBSs. As far as I'm aware this is the first disk based Atari magazine written entirely in HTML format which is globally established format used on the World Wide Web (WWW). This means the same magazine can be distributed through the post and made available online and read across the WWW on any hardware platform.

The release of this issue was timed to coincide with the release of the first colour capable Crystal Atari Browser (CAB, formerly HTML-Browser) a copy of which is included on the disk. A neat install program is provided to copy the browser and magazine files to your desired destination and all that's left to do is run CAB and point and click.

There's over 30 articles, featuring hypertext style links and buttons to push. Some recent reviews include glorious colour illustrations. In contrast to the earlier ST-



Here's the home page, to read the magazine simply click on the icons, buttons and links

Guide based releases HTML displayed in CAB can take advantage of colour, multi font, style and point size support with text flow around images and really looks like the way forward for interactive electronic publications. CAB dithers colour images to monochrome so whatever machine you own you'll still be able to read the articles. Naturally some articles are Falcon specific, but there's plenty to interest any Atarians.



JC

Da Capo v1.22a

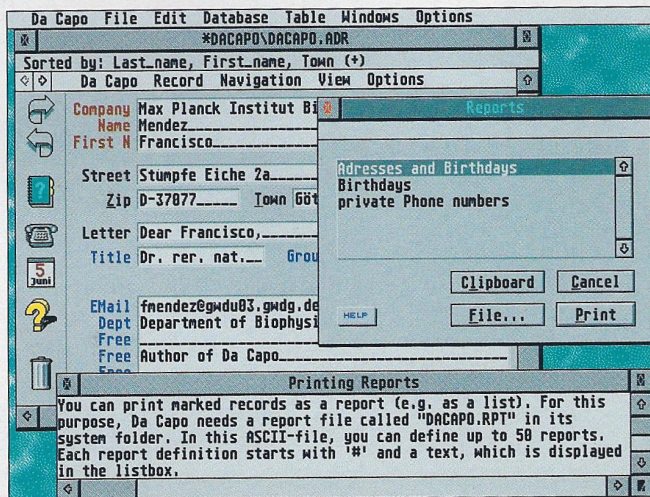
Shareware • All Ataris



Da Capo is an address database which sports one of the most beautiful, non-modal interfaces around. It runs as a program and also as an accessory with a minimum memory requirement of 512K.

Records are shown in a spreadsheet type table and a mask window. Double clicking on an entry in the table opens up the mask window which lets you view and edit records and data in detail. Everything can be done using the menu bar local to the mask window, clicking on the icons or editing the text fields. As the mask window is small, the bottom part of the window changes according to which icon you click on: the telephone icon shows editable phone information, the calendar icon shows editable data about birthdays, and so on.

Each record has up to 30 fields, most of which are user definable. Da Capo supports the AV-Protocol, which means that it



Never lose track of your friends and business colleagues with Da Capo.

communicates with other programs such as Selectric for opening multiple files.

Da Capo has very flexible import and export options. Other features include an auto-locator, comprehensive search functions, finding and deleting double entries and lists for towns, countries and even post codes. Da Capo will also remind you of any birthdays or important anniversaries coming up and will dial telephone numbers if you have a modem attached.

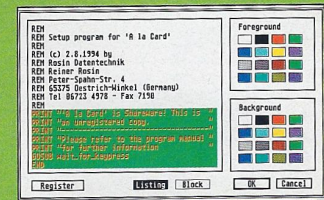
Da Capo costs £15 to register which removes the 40 address limit.

DB



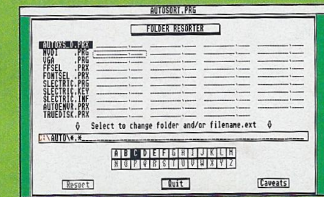
A la Card

A la Card is a patch program which enables anyone programming in GFA Basic to continue to do so under MagiC Mac. Support for graphic cards with more than two colours is also included. A la Card performs its magic by patching your copy of the GFA Basic interpreter v3.6. A la Card is also compatible with GFA Patch, which is the other essential patch every GFA programmer should be using.



AutoSort v4.1

AutoSort makes it easy to change the running order of programs in the Auto folder and other directories. After launching AutoSort and selecting the desired directory files can be re-ordered by simply dragging them to a new position using the mouse. Select the Resort button to save the files in the revised order, it really couldn't be easier!



GEM-Rec v1.2

GEM-Rec is a new hard disk recorder capable of recording two separate stereo tracks. Currently there are no editing possibilities or any DSP effects are available, which make GEM-Rec rather limited in use. To put it short, GEM-Rec allows you to record and replay your samples. It's very easy to use, due to a nice layout and modern interface. It looks very promising, and if the final version will be as hot as it looks, we might be looking at a serious competitor to WinRec.



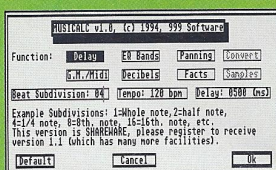
MIDI Mouse Music v1.1

Jammin' with yer mouse?! Now that's possible with MIDI Mouse Music from Gareth Jones (of Schoenberg fame). The program allows you to compose music from the movements of your mouse. It's always interesting with new approaches of making music, but as there are no way of recording or saving your results, MIDI Mouse Music can't be used for any serious purposes.



Musicalc v1.0

Musicalc, written by Martin Milner of 999 Software, is a little music utility with a difference. Basically it's a delay calculator, together with a couple of useful facts about MIDI and audio thrown in, such as General MIDI (GM) sound groupings, sound pressure levels and various instrument frequencies. The registered version costs £3 and offers even more facts. Musicalc runs fine in both medium and high resolutions, and uses less than 12Kb when installed. It's usable, but the interface could have been a whole lot better.



The Cookie Monster v0.1a

Atari introduced the cookie jar so that the system and developers could indicate the capabilities of the machine. The Cookie Monster reads this cookie jar and interprets the information within it. Other programs do this, but The Cookie Monster interprets the contents before displaying them to be saved as a text file. It also recognises around 150 cookies with more being added in future.



Kozmic v4

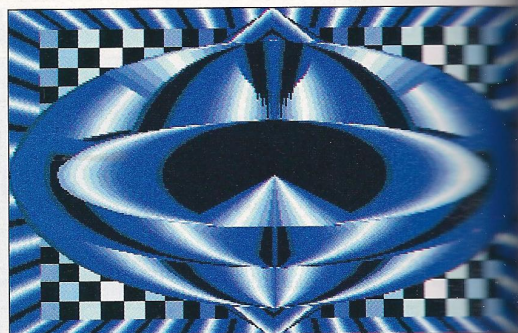
Freeware • ST/STE



Kozmic is a digital kaleidoscope for your ST which lets you create psychedelic patterns and save them to disk. It is absolutely wild! You can achieve very good effects in hardly any time at all and no previous artistic experience is needed. The saved screens can be used as game title screens, album covers and slideshows can be created for parties etc. Surreal graphics produced by Kozmic have even been seen in pop videos on MTV!

All operations are carried out in a friendly mouse-driven graphical interface and STes with more than 1Mb have the added advantage to use a full selection of stereo sound effects as well as the mono ones. Full on-line help is included: the function of the buttons is shown in a central view screen as you move the mouse over each one.

The effects that you can apply are excellent. Stomach churning ones can be



Create mind-blowing patterns and graphics to be amazed with KOZMIC.

achieved by using the distortion icon for variable speed scrolling. These effects can be limited to a user defined area of the screen.

You need a ST with up to TOS 1.62 and a colour monitor to use Kozmic. Sadly, it does not work on any other TOS incarnations or even a Falcon. So, if you want to create all sorts of colourful patterns and play around with the colour palette cycling, take a look at his. It is like totally cosmic, man!

DB



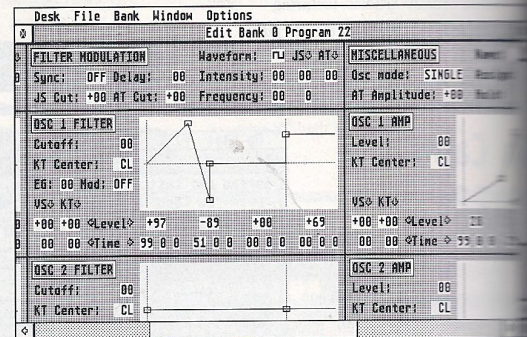
EKED-M1 v1.0

Freeware • All Ataris



EKED-M1 is an editor and a bank manager written by Steven Eker, for the popular Korg M1/MIR range of synthesisers. It can keep up to ten banks in memory at a time and it handles programs, combinations, drum kits and global data. The editor is located inside a scrollable window, which makes it friendly for a multitasking environment. Unfortunately very few parameters are represented in graphics (in fact only envelopes and modulation waveforms are), which in turn make editing somewhat dry. It runs fine in any resolution above ST Low and it occupies very little memory (around 250K).

EKED-M1 is an editor, no more, no less.



Closeto the edit: EKED-M1.

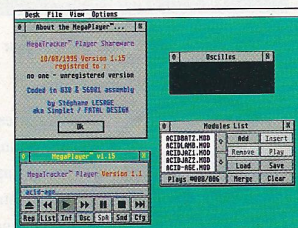
There are no fancy extras, such as a real librarian or patch randomness which usually are found in a package like this. EKED-M1 is definitely not the most advanced M1 editor on the market, but it will certainly get the job down.

MegaPlayer v1.15

Shareware • Falcon only



MegaPlayer is a French module player capable of playing a vast number of formats, including a couple of common PC and Amiga formats. The DSP is used to produce high quality output without slowing down the computer. Among all its features we find a playlist and an oscilloscope. A very nice feature is that MegaPlayer automatically checks the system language, so the right resource file will be loaded. Currently there are resource files for English, French and Spanish languages.



You want background music? French MegaPlayer will do the job.

It runs both as a program and as an accessory, and it occupies about 100Kb of memory. The registered version offers more features, such as a 2*32 band frequency analyser and support for the AV-protocol. The development is very active. New versions appear at least once every month, but usually every second week. If you're into modules it's well worth checking out.

MBE v1.01

Shareware • All Atari

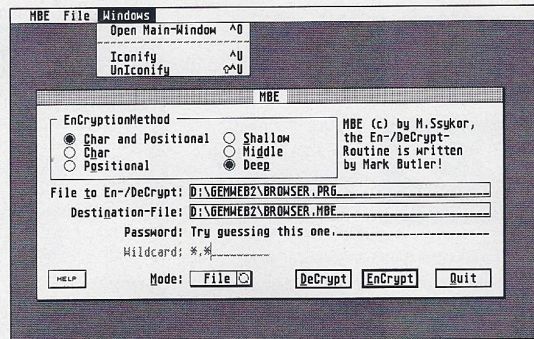


Pretty Good Privacy (PGP) is a very good file encryption program but it is slow, and gobbles up a lot of

disk space. This is overkill for most people who don't need such good encryption for personal use and MBE (Mark Butler Encryption) suffices for most tasks.

Incidentally, MBE is programmed by Manfred Ssykor, the author of Easy_PGP Shell (reviewed in Issue 4), inspired by encryption routines done by Mark Butler, hence the name of the program.

MBE offers nine types of encryption in effect. One is where every character in the data is replaced with a different one and is dependant on the original character and its position in the file. Another one is where all the data is jumbled up and swapped around. The best encryption offered by MBE is a combination of the previous two. These are then subject to three different levels of



security, with the extra function of adding a password.

Unlike other encryption programs, MBE lets you encrypt and decrypt multiple files in one go using wildcards. The working environment is the friendly GEM and it is so easy to use you can jump straight in, with on-line help available. MBE even supports Drag&Drop and iconification! Registration is a snip at £6 and lets you encrypt files larger than 48K. So, if you think you need to secure some files for whatever reason, take a look at MBE.

Secure your important data with MBE.



ST-Guide v1.4

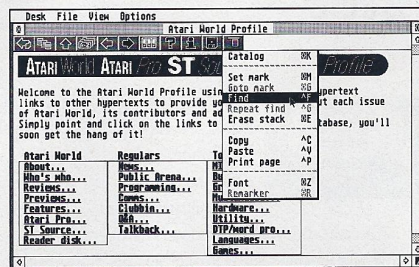
Freeware • All Atari



ST-Guide doesn't support colour images or offer advanced font handling but does provide other

significant advantages which make it the preferred choice for on-line help within applications. An ST-Guide hypertext is compressed into a single file which is much easier to deal with than folders full of images and multiple documents associated with other formats. ST-Guide's ability to provide context sensitive help by linking a page in the hypertext to a Help button in a dialogue or drop down menu entry inside an application is unsurpassed.

The new icon bar includes extra options for navigating hypertexts.



The relevant information is presented in manageable chunks with 'links' to other hypertext pages indicated in bold underlined text. To move between links simply select them using the mouse. The 'Lite' version, included with applications which support the HYP format, is all you need to read hypertexts but if you fancy creating your own you'll need to obtain the complete distribution.

DB



Sha'uri v1.1

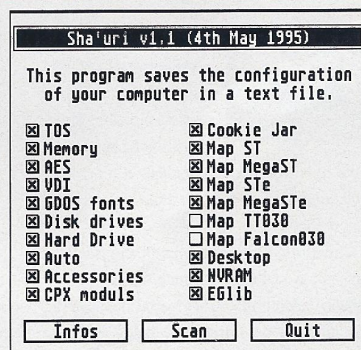
Freeware • All Atari



Sooner or later we run into a problem with your system. It could be a hardware problem or maybe a software conflict but where do you start? Running Sha'uri over your system is a good starting point. Sha'uri analyses your system identifying your TOS version, installed memory, drives and key software including Auto folder programs, CPXs, Accessories, Desktop setup file, Cookie jar contents and other techie stuff. Everything is saved in an ASCII text file which can be read and printed out from the desktop, text editor or word processor.

Although the file isn't exactly bedside reading if you need to report bugs to programmers or chat over hardware problems with your supplier, Sha'uri will help them to help you.

JC

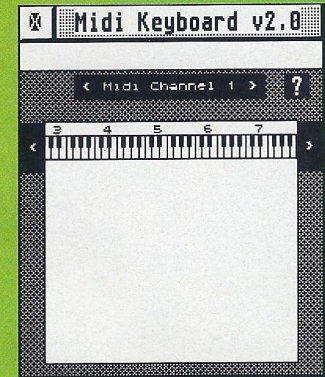


Individual options can be toggled off if they cause problems on your system



MIDI Keyboard v2.0

MIDI Keyboard is a virtual MIDI keyboard, in the form of an accessory. It can transmit on all 16 MIDI channels and in any velocity. It only occupies about 18Kb of memory, and is useful to have around if you want to test your equipment without starting your sequencer.



Crystal v1.55

Crystal is an attempt at having a highly portable freeware GEM library under GEM and Modula-2 systems under PC-DOS (using PC-GEM), GEMDOS (using ATARI-GEM), FlexOS (with X/GEM) and UNIX (using X/GemOnX). This is a comprehensive package which contains libraries, source and example programs for both GEMDOS and PC-DOS systems. It comes with the C preprocessor programs for both platforms.

ICO2RSC v1.10

ICO2RSC imports Microsoft Windows icons in ICO format and exports colour icons in RSC format which can then be used with desktops that support the loading of icons. They can be added to the DESKICON.RSC file for TOS 2.06 and above, or an alternative desktop such as Thing, Gemini or Ease. You are asked to specify the directory containing the ICO files, and the RSC output directory. Simple!

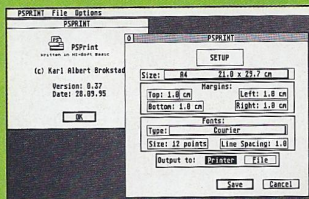


STOS Falcon Extension v1.2

This is an extension which enables STOS programmers to use the extra facilities of the Falcon. This version only touches on some of the Falcons abilities lightly but this is bound to change with future versions. The package contains some general commands and many graphics and sound commands for the Falcon. It is shareware and only costs a fiver to register.

PSPRINT v0.37

There is a severe lack of programs for the Atari which support PostScript printers. Even NVDI lacks a PostScript driver. PSPRINT converts text files into PostScript files, to be saved to disk or printed out. PSPRINT only handles simple ASCII text files as it is still at a very early stage of development. It is likely to change to include support for IMG pictures and GEM drawings.



VDIFONT v2.00

This lets you use any GDOS font, of any chosen size as the main system font. You can have alternative system fonts using NVDI, MultiTOS and MagiC, but they are not as flexible as VDIFONT. You require at least TOS 1.04 and an incarnation of GDOS. The clever bit is done by a simple AUTO folder program, and a CPX lets you change the system font.

TrueDisk v2.3

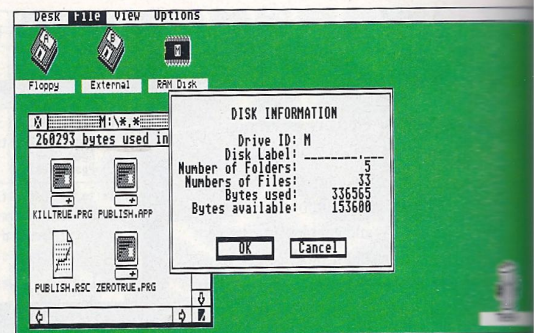
Freeware • All Atari



TrueDisk is a reset proof RAM disk which means it's capable of retaining its contents even after a warm boot.

Installation is straightforward, copy TRUEDISK.PRg into your Auto folder and use DirSort/AutoSort etc to ensure TrueDisk runs as early as possible then reboot.

To change the default settings (Drive M: with 512Kb memory) hold down the Control or Alternate keys when booting. If you're running TOS 1.04 or later select the 'Install drives' option from the Desktop Options menu otherwise add a new desktop drive icon manually. The drive can now be used to store programs and data just like any other disk. Two auxiliary programs are included, ZeroTrue erase the contents and KillTrue removes



TrueDisk completely and returns the memory for use by other programs.

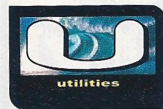
TrueDisk is compatible with all TOS compatible operating systems including MagiC and because it runs from the Auto folder doesn't occupy a desktop accessory slot.

Working from floppy disk is slow, if you've got memory left, consider adding a RAM disk.

DB

Atari Explorer Online Volume 4 Issue 8

Freeware • All Atari



Atari Explorer Online (AEO) is a monthly publication for the entire Atari community. It covers

the ST, Falcon, TT, 8-bit Atari, Lynx, Portfolio, and the Jaguar. This issue is a 160K text file (around 55 sides of A4). There are around 14 contributors each with their own area of expertise, one of them being our very own Iain Laskey.

AEO usually has something for everyone however this issue is mainly Jaguar news. I was

very surprised to read about so much going on in the Jaguar scene with plenty of previews and reviews with a list of Jaguar hardware and software

currently available and in development. This issue also sees a break from the excellent PD coverage by Michael Burkley. Instead he reviews the Ultimate Virus Killer. So if you are suffering from withdrawal symptoms between each issue of Atari World, check out AEO.

AEO - a 55 page magazine for free.

DB

Music Box v4.04

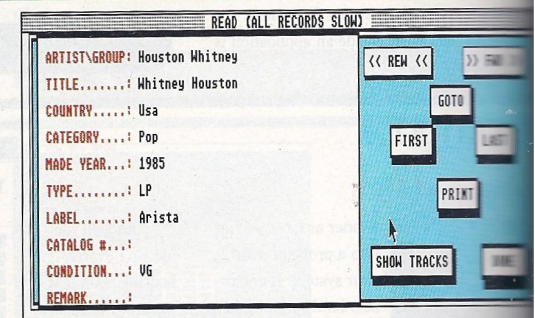
Shareware • All Atari



Music Box is an excellent database for keeping track of your music collection. The unregistered version is limited to 60 records, but you can enter details of 700 albums on a 512K machine when registered!

With Music Box you can enter the usual details you would expect from a music database: media, title, artist, record label, songs, and play time. It lets you go further: value, its condition, personal evaluation and which ones you have lent out and to whom!

Music Box is mouse



Music Box proves how powerful STs are... it was programmed on one of the earliest machines.

controlled and on-line help is included. It runs in ST medium and high resolutions with support for higher ones planned. Registration is 20 Pounds and removes the 60 record limit, but also entitles you to two registered programs: Movie Box and Disk Box.





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H.E.R.O.

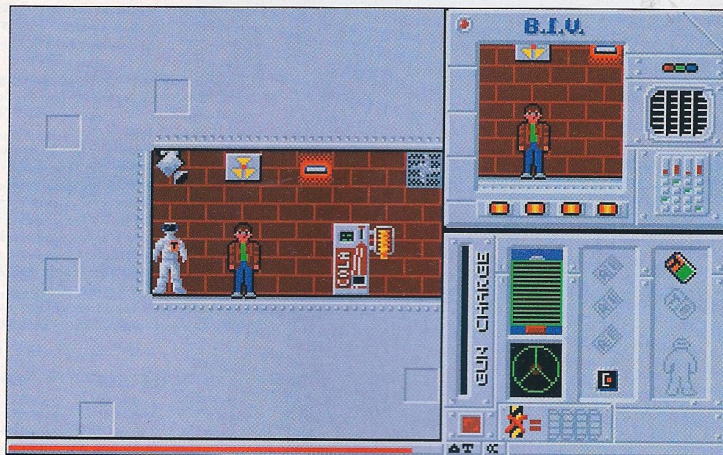
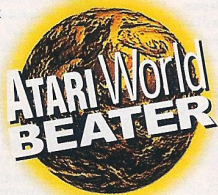
Goodman • £1.95 • Any ST

Public domain games of this quality are truly few and far between. Originally a commercial offering, H.E.R.O. has now had its status changed to freeware and you can enjoy sixty levels of smoothly animated platform capers for little more than the cost of a video for the night. The storyline bases itself around a disaster in an artificial intelligence research centre; one cup of coffee (spilt) and one rather sheepish lab operative (shot, presumably) leads to the whole facility being sealed off, and it's your job to dash in and sort things out in a James Bondy sort of way.

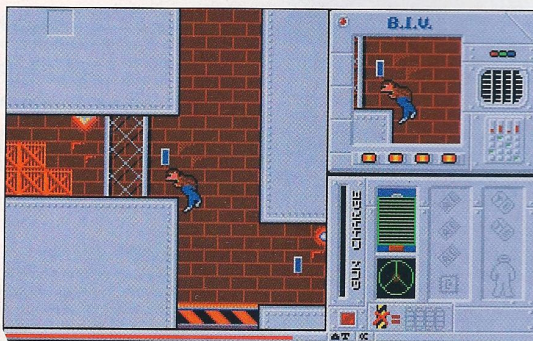
It's the perfect setting for a precision platform game. The general aim of each level is to rescue survivors and to do that you will need to find a radiation suit, and door passes will also come in handy along the way. These, and plenty of other objects, can be found on the floor and in the supply cabinets littered around the smoothly scrolling complex. Gamers of a certain age will probably be chanting "Impossible Mission" under their breath at this stage, and it's true to say that H.E.R.O. does have a very similar atmosphere to the Epyx classic of yesteryear.

Fortunately, the graphics are a little more modern, the slick animation making the whole game a joy to behold. And wonder of wonders, it actually plays well too. Joystick control is precise and you soon get the hang of avoiding or shooting robots, while desperately seeking a door pass. True, it can be a bit frustrating at times, but anybody who says they played through Prince of Persia without an irresistible urge to "stick that damn cutlass where the sun doesn't shine" is either a liar, or Dominick Diamond himself.

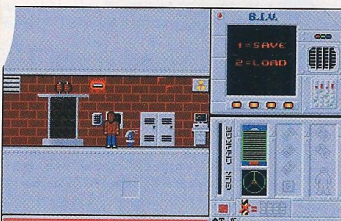
Those who are expecting the complete, unadulterated commercial game are in for a bit of a disappointment though. In order to cram the whole game (all sixty levels of it) onto a single disk, one or two parts of the commercial game have been removed – namely, the digitised sound effects and animated intro. Certainly a small price to pay for this excellent freeware game.



Door passes and radiation suits must be collected to teleport the survivors to safety.



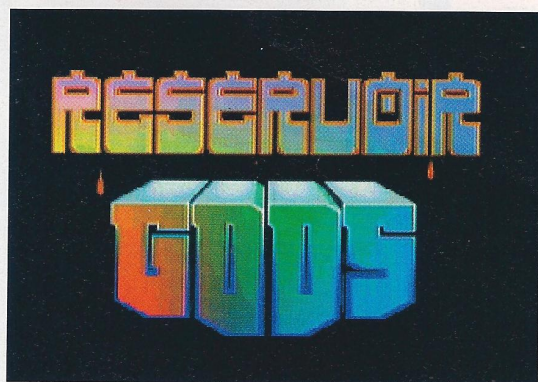
Slick animation and smooth scrolling lend a professional atmosphere to H.E.R.O..



Your position can be saved via computer terminals scattered around the complex.



Lockers must be searched for valuables – give me the goodies now!



Reservoir Gods – we love 'em! After all, what's a snotty email between friends, eh?

Tautology II: Better graphics, better sound, better game. That's it!



Tautology II

Floppyshop • £2.00 • Falcon '030



Programmers are temperamental creatures; they seem to get upset over all sorts of minor problems – two sugars in their tea when they only want one, packets of Liquorish Allsorts with too many nasty pink ones, and reviewers that innocently cover less than the very latest versions of their games.

Which brings us nicely to Tautology II – we're still on a tile-matching tip here, and the gameplay is remarkably similar, but you've got the benefit of better graphics, totally aggressive music and a greater degree of configurability. The extra layer of polish on the presentation really does make the game though – any pining for Match It on the ST disappears as you are faced with your first tight time limit; no, make that very tight time limit. Much as I would love to give the latest incarnation of Tautology a low score, purely to prove that writers can be temperamental too, I can't because it's rather good, so!

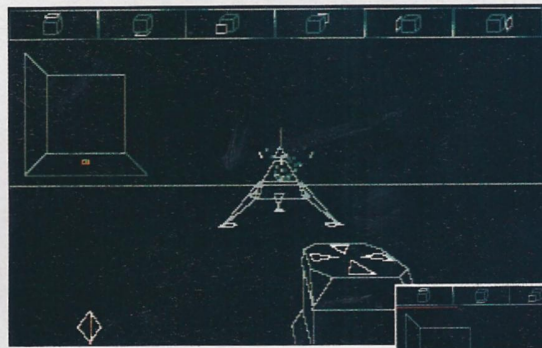


1969

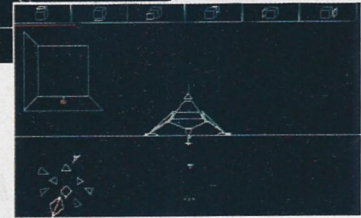
Goodman • £1.95 • Any ST (or Falcon with Backward)

1969 is essentially a Lunar Lander clone, with one unique difference – it's three-dimensional. The mouse controls the craft as it slides its way through the atmosphere towards a landing pad down below, and success demands careful use of the thrusters and the various view modes. An altimeter and a perspective view of the whole play area further help you to get that bird out of the sky. The first couple of stages are fairly kind in positioning you directly over the landing site, but the difficulty level soon escalates. Of course, the whole game pivots on the control system and 1969 does draw quite a good balance between manageability and friskiness. Put it this way; it's certainly no walk-over.

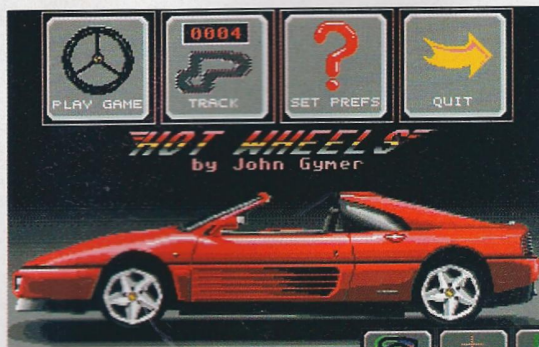
As simple as the concept may sound, 1969 is actually quite tense, although my opinion is probably tainted by the fact that I've just seen Apollo 13. Go on, tell me in all honesty you won't be muttering "failure is not an option" under your breath.



"Houston, this is Apollo 13" – We're coming in for a landing!



Lunar Lander 3D has arrived, and boy oh boy is it tricky!



Drive hard around the corners and do your best to knock other cars out of the way, but watch out for the oil slicks!

It's easy to edit tracks and you can also adjust the handling characteristics of the cars.



Hot Wheels

Floppyshop • £2.00 • Any ST



Hot Wheels is virtual bumper cars. Superficially, it may look like a high performance racing game, but you only need to have one taste of the action to realise that the whole aim of this game is to ram the other drivers out of the way, or at the very least veer in front of them so they can't make it past. The handling of the cars is equally cartoon-like with skids occurring on every corner, but it all adds up to a rather enjoyable experience. There are three cars in each race including yours and you have the choice of playing against a human opponent. The tracks gradually get more complex and obstacles such as oil slicks and hairpin bends keeps things lively.

It does take a while to get used to Hot Wheels, and indeed the control system can be annoying to start with, but play for a little longer and you will soon be sliding around each corner with the best of 'em – Damon Hill, nowhere!

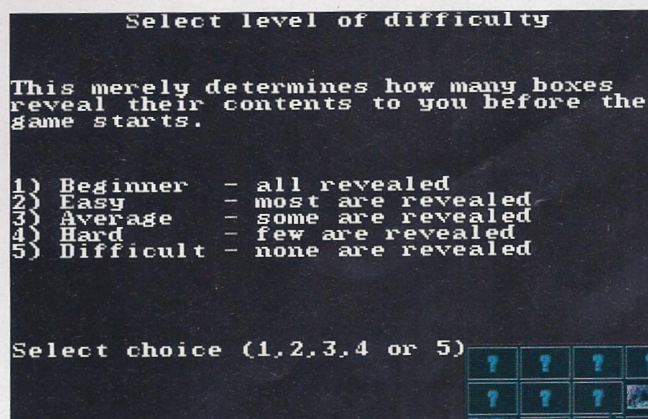


Memory Recall

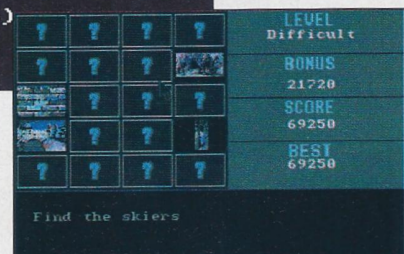
Floppyshop • £2.00 • Any 1Mb ST

If you struggle to remember important names or dates, then Memory Recall may be just what you need to kick that flabby brain into shape. The gameplay is fairly simple – you are shown a selection of mini pictures at the start of the round, and then have the goliath task of remembering where each one lies. There's no penalty for clicking the wrong box, but the rapidly descending bonus indicator is unwilling to tolerate too many mistakes.

Each step is accompanied by sampled sound effects which, we presume, are supposed to keep you ploughing on through to the bitter end. There are several difficulty levels ranging from easy (shows you all of the pictures beforehand) to hard (shows none). On any setting it's fairly simple to amass a large score and it's easy to get bored after a couple of games. Perhaps one for the younger players.



Various difficulty levels are available, but they do little to improve Memory Recall's long-term playability.

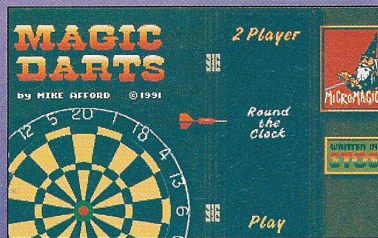


Just find all of the requested pictures and you are guaranteed to set "a new high score"!

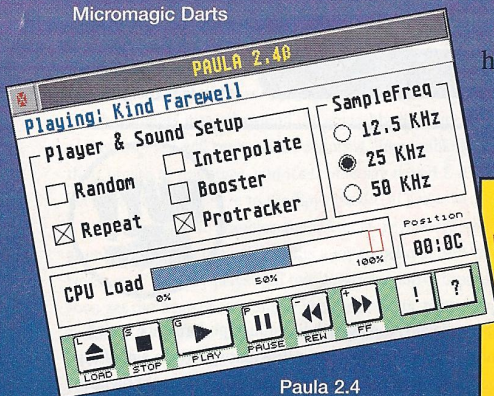


GOODMAN'S

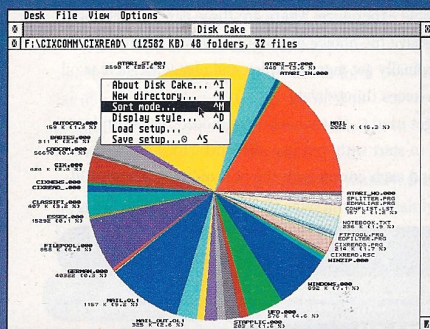
THE COMPLETE PUBLIC DOMAIN AND SHAREWARE SERVICE



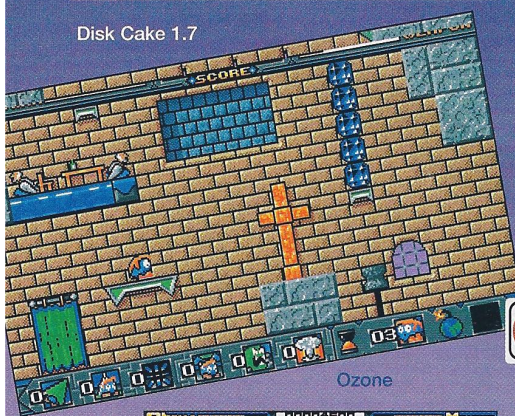
Micromagic Darts



Paula 2.4



Disk Cake 1.7



Ozone



Ozone

No matter how much coverage the ST Magazines give to Public Domain & Shareware, they only give you a sampler of the vast range available. As one of the longest established ST libraries in the World, we are constantly adding new titles to our, already extensive collection, so why not send today for our comprehensive PD & Shareware Guide, it's now approaching 260 pages, with good descriptions, screen shots, etc.

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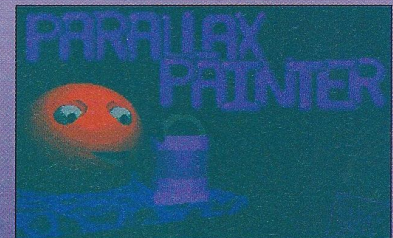
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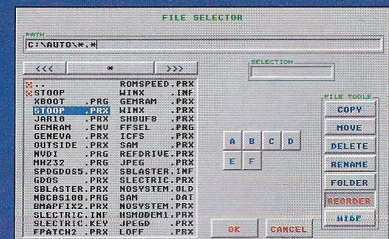
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16 Conrad Close,
Meir Hay Estate, Longton,
Stoke-on-Trent. ST3 1SW.
TEL: 01782 335 650
FAX: 01782 316132



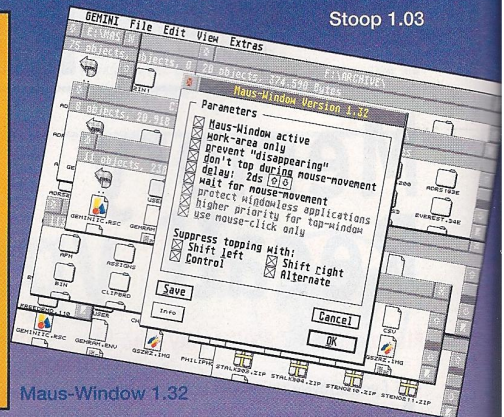
Parallax Painter



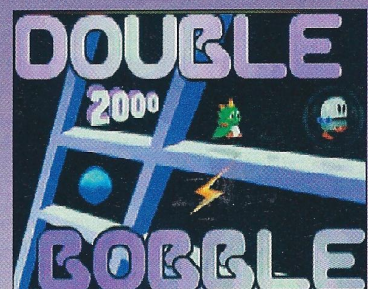
Easy Money



Stoop 1.03



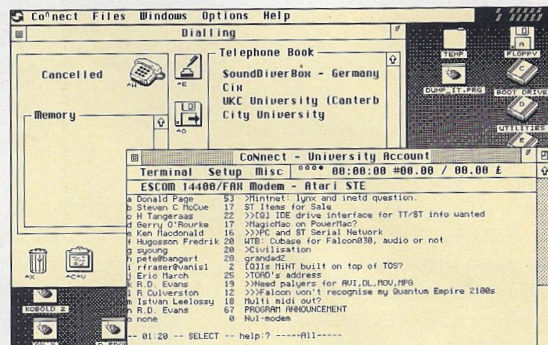
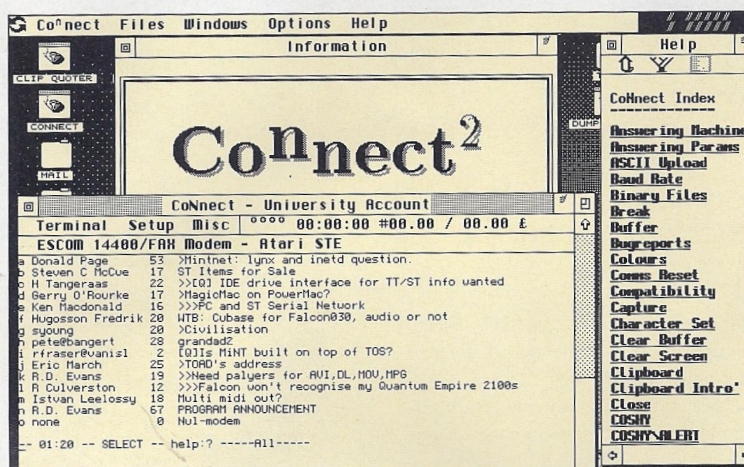
Maus-Window 1.32



Double Bobble 2000

STranded

Ben Hall finds out that being stranded on a desert island with nothing but an ST and a choice of three disks isn't quite as bad as it seems...



What a nightmare! Stranded on a desert island, with nothing but a single solitary mango tree for sustenance. But wait, what's this? Ah, it's my trusty ST! Hmm, maybe it's not such a nightmare at all...



Popping the first of the three somewhat innocent looking blank disks into the drive and switching on, I find a copy of GFA Basic 3.5. This is a great system for developing programs, and it features a very nice editor for writing the source code. After all, being alone on a desert island is naturally ideal for writing computer programs - I can work for months without interruption, and write any other programs I might need!

GFA is an interpreted language, which means that I can run my programs instantly without having to wait for them to compile. Writing and testing programs in this way is very fast and easy, and an optional compiler is also available to produce standalone programs that will run straight from the desktop.

OK, so I've finished programming for the time being. Time to exercise a bit of creativity. Let's see what disk number two has in store. I pop it into the drive, stopping

briefly to write-protect it on the way - I don't want to accidentally delete anything!

Noise maker

Ah yes, EMAGIC's Logic, the Atari version of the popular sequencer program - but I don't have any of my keyboards with me! Still, that's not too much of a problem because Logic has a fully-featured score editor, so I can write music directly onto the score, in exactly (well, nearly) the same way as composers of old did, but with the ability to cut and paste, save and typeset my music in ways that Mozart could have only dreamed about.

In addition to the score editor, there are three other powerful edit windows, a graphical arrange screen, and a powerful transform function, and these all help to make an indispensable tool for anyone with more than a passing interest in music. I could also use Logic's powerful environment page to define virtual keyboards that I could play using the mouse, and a chord recogniser object so I don't forget my chords! And when I eventually get rescued, all my music would be saved in a form ready to record, print and produce. After the amount of time I would have had on the island, I'd be sure to come up with a Number 1...

Connected

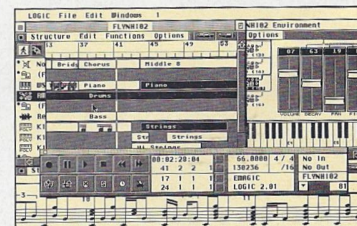
So what delights do I have in store for me on

the last disk? Double clicking on the A: drive icon I am presented with a disk directory of a pretty full disk, and I quickly locate the program - CONNECT.PRG, the communications/terminal software for all Atari computers. Great, because this program contains everything I'll need (software wise) to interface with the outside world.

Connect works with any modem, and contains a really useful script facility where I can automate my online sessions, and really cut down that telephone bill. It can even act as an answering machine with a Falcon and the correct modem.

Now I can keep tabs on what everybody else in the Atari world is doing, by connecting to those millions of people that form the Internet. I can download thousands of public domain and shareware programs, and talk to people with similar areas of interest.

I can even call for help and bring about my rescue - but with my ST and this quality software (and no address to send the 'phone bill to), I'm not so sure that rescue is high on my list of priorities. Now if only I had a ladder so I could climb that mango tree...



Clubbin'

As we outgrow the capabilities of our software and hardware it's easy to forget that some people are yet to take their first step on the ladder of computer literacy. Harry Sideras takes a look at the Ground Floor Project.

It's a familiar story. In whatever part of the country we live there exists a need for a local base for community projects with resources readily available for them to draw on. No individual group can hope to afford the costs alone. The Ground Floor Project is a registered charity, started in the Pennine town of Hebden Bridge in 1981, that aims to act as a focus for community initiatives and activities.

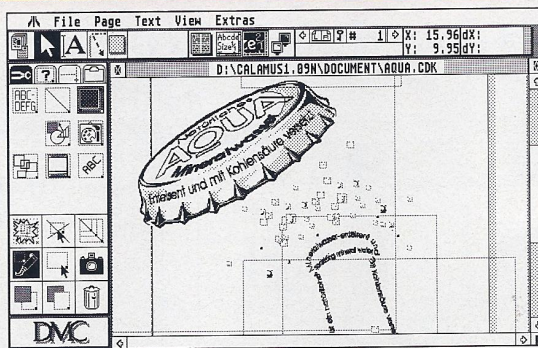
The Project began by targeting young people, but quickly grew to encompass other groups in the area, particularly the disadvantaged. Their first act to support this aim was to lease a building with full access for the disabled which could act as a Community Centre.

From this point on the Project has evolved and goes beyond providing meeting facilities and an office equipment resource, it also gives access for each group to professional advice and support, fund-raising equipment, training and other information that helps them to succeed and grow by fostering good relations with outside bodies that can give added help.

Community aid

The sort of groups that use the centre include a youth club, dance group, martial arts tuition, parent & toddler group, yoga and a credit union, but it also provides a venue for public meetings and performances. The centre itself includes displays and information on local events and provides community information, benefit help and acts as a referral service for people seeking specialist advice or counselling on all manner of subjects.

A key part of their services, though, are related to their computing facilities. Talking to Jae Campbell, the Project's Resource Manager and stalwart Atari user of eight years standing, I found



Calamus - the workhorse for DTP presentations

that their resources comprise an ancient original PC, a Mac SE and a few 4Mb STe's supplemented by a couple of donated dot matrix printers and a single Deskjet 500.

With these Jae provides a community print shop with the help of Calamus, Timeworks 2.04, Arabesque Pro and related graphics software as well as offering training in the use of computers generally.

What Jae finds is that the computers are mainly used for teaching adults with learning difficulties, while the STes are used particularly for word processing, DTP and graphics work due to the easy learning curve for getting people up to speed when they have little computing experience.

All the platforms employed contribute in the effort to train people in essential work skills as well as allowing both individuals and community groups to have access to resources they would otherwise have to go without. With these tools they are able to canvas support for their services to local people cheaply, effectively and economically at the same time as educating themselves in professional work methods.

Helping hands

Unsurprisingly, demand for the computing services outstrips the Project's ability to supply. The funding they receive doesn't include money to enhance their equipment to modern standards and the nominal charges that they make only just cover their costs for consumables. As such, they rely on

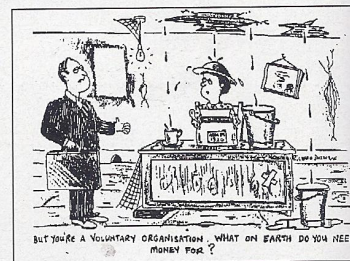


Arabesque Pro and Outline Art jazz up the layouts

donations of hardware and software to increase the usefulness and practicality of what they have.

To this end Jae puts a professional and persuasive case for the support of the Ground Floor Project's aims to businesses in the form of corporate sponsorship, not only in cash terms but also goodwill and donations in kind such as unused office equipment. In return businesses find that links with a registered charity bring high public relations gains associated with publicity of their links and a very positive reaction from customers.

This kind of reinvestment in community projects isn't reserved for the bigger corporate companies. With a little imagination it's something that smaller firms can be involved in at a minimal cost with huge rewards waiting on both sides. Why don't you speak to your boss about it?



Telling it like it is!

Making contact

If you feel you can help in any way, either on a personal or professional basis, contact Mr Jae Campbell, Ground Floor Community Centre, Holme Street, Hebden Bridge, HX7 8EE, Tel: 01422 844991.

Check out the old spreadsheet or database software you bought and never used, clip art suitable for either Timeworks or Calamus or any graphics or word processing software that you no longer need. Originals only, mind.

Businesses can help in the form of office furniture, exhibition boards, display equipment, fax machine, phone equipment or old modems, scanners and printers.

Feedback

Feedback is always welcome, either at the magazine address or via email to sidcelery@cix.compulink.co.uk. Online, you can join the NeST support echo N.SUP.ATARI_WORLD at any NeST BBS or on CIX join the atari.world conference.

Q&A

You send in the questions - our team of experts sets about solving them...

Jaguar Trouble



Q First of all I'd just like to say how great your

magazine is! I'm glad to find someone supporting the Jaguar.

Now to my problem. I really enjoy playing Aliens V Predator but I'm stuck. I can't find most of the security cards. Is there any kind of cheat mode on this game?

Joe Smith, London

A You're in luck, mate. It's rather convoluted but there is a cheat that should be able to help you. Press the following keys to get into cheat mode:

Pause, Option, 1+3 (together), B, A, 9, A, 9, A, *, Option, 6, #, *, *, Option, 2, Option.

You should hear the predator laugh if you entered them all correctly. Now you have the following commands:

Raise Security Clearance = Option+6
Lower Security Clearance = Option+9
Toggle Motion Tracker = Option+8
Recharge All Weapons = Option+1+2+3+4

Shotgun Toggle = Option+1
Pulse Rifle Toggle = Option+2
Flame Thrower Toggle = Option+3
Smart Gun Toggle = Option+4
Level Selection = Option+A to go up and Option+B to go down.

God mode = Option+5
God mode makes you invincible and immune to face-huggers - they just drop off you again.

Iain Laskey

Give up the Ghost



Q Help! After using my machine, an STFM, for a

while I find that my mouse inverts, down becomes up and vice versa. I've owned the machine for some time and I'm wondering if I have a hardware fault that's causing this mouse problem? If you could help me out and give me the name of a company who could fix my STFM I'd appreciate it.

Roger Briggs, Hartlepool

A Don't worry Roger! Your machine is in perfect order. Unfortunately you've picked up the infamous Ghost virus. This little blighter causes the mouse inversion you describe. Sadly, due to a terrible accident with a magazine cover disk, this virus was spread far and wide across the Atari owning community and is now the most common virus on the Atari.

Thankfully, apart from the chance that it could destroy the boot sector of a game disk it is entirely harmless but that's no great comfort.

What you need to do is this: look through the adverts in this magazine and find someone that sells a virus killing program such as UVK (which it so happens is reviewed elsewhere in the issue - Ed).

Buy it and use it to clean up every disk in your collection. Don't touch commercial game disks until you know you can use UVK to replace the boot sector code because a virus killer may think that their boot sectors are viruses and will make them unusable. This might be a rather long job but it's the only approach to effective eradication of viruses.

To save having to repeat this process take some time out to think

TIP Floppy fuss

My Triangle 720K drive (NEC type) of seven years vintage gave up the ghost and I decided to see if a standard 1.44Mb PC drive would work as a 720K drive with my STFM.

I borrowed one out of a PC at work and it fitted inside the Triangle case OK and seemed to work, so I then bought a Sony MPF 520-1 drive from a local PC shop for £30.

This seemed to work fine at first at up to 83 tracks and 11 sectors maximum in all the normal ST formats. It would not work at 1.44Mbs with HD disks, but this was expected. All the connectors fitted OK.

After a while I began to notice the occasional scrambled folder names in file selectors and the desktop, which was found to be caused sometimes when a disk was changed. My old NEC drive never suffered this ever.

To produce the symptoms, simply open drive A window with a write enabled disk in A, close this window, change the disk to another write enabled disk and open drive A again. The old directory is shown without reading the new disk. If any files were to be saved to this disk now, it would be corrupted as the ST still thinks the old disk is in the drive! Similar operations with a file selector give scrambled folder names. Substituting any of the above disks with a write protected disk stops all the problems.

I had heard that the problem was something to do with the write enable line of the ST, so I decided to exercise my electronic skills and came up with the following modification for the SONY drive, but which should be generally applicable in principle.

A series RC network is wired on the back of the drive circuit board between two points A and B. A is the drive's 'disk present' line - the Sony's is just behind the drive LED. and is marked S2. B is pin 28 on the large connector marked CN1 on the Sony and is the write protect line to the ST. It works by sending a 0v pulse to the ST write protect line every time the disk is changed, whether the write tab is open or closed; this seems to be what the ST is looking for and which some drives don't do.

Other makes of drive that have this media change problem should be modifiable in the same way as long as they have a circuit to detect if a disk is in the drive; search for it with a meter by trial and error if you know what you are doing. The write protect line can be traced back from pin 14 of the ST floppy connector to the drive internals.

I have been using this drive replacement and modification for a few weeks now with no problems noted. I hope it may be of interest to yourselves and your new readers. Congratulations on an excellent magazine.

Steve Bradshaw, Kent

about prevention. Almost all viruses are loaded when you turn on or reset your machine - so if you make up a boot disk, check it with a virus killer, write protect it and then always boot with that disk in the drive and you'll be okay. Hope this helps.

Maurice Collins

ACSI a question



Q I wonder if you can help me? I'm thinking about

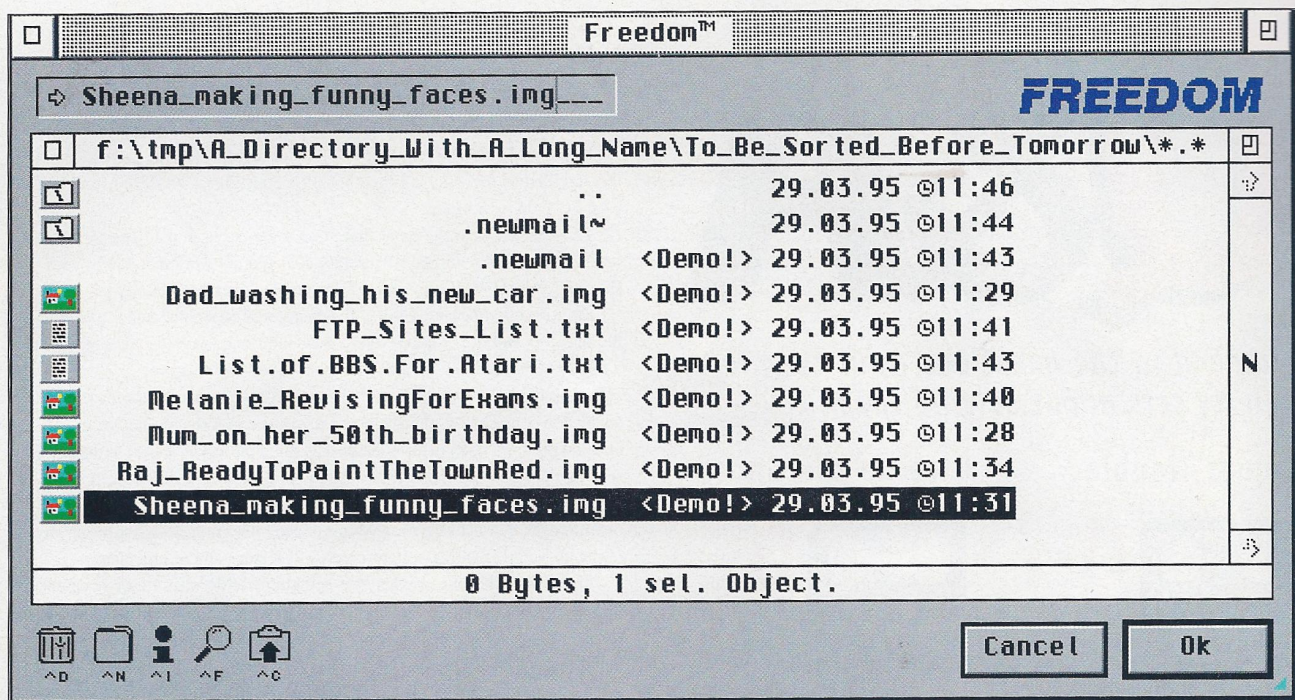
buying a hard disk drive but I am confused by the differences between DMA, ACSI and SCSI ports. Does my machine, a three year old STe, have these ports?

Alan Brightcock, Scunthorpe

A Yes, your machine has a DMA port (all Ataris except Falcons have one) and no, your STe doesn't have a SCSI port (that's what Falcons have). When the Atari was first developed the designers decided to use the SCSI protocol to handle devices connected to the DMA port. Unfortunately they got it a bit wrong and this ACSI has been a thorn in the Atari's side for years.

While SCSI devices were becoming commonplace - and therefore cheaper - third party device designers had to work hard to develop ACSI compatible hard disks. However all is not lost. There are now a number of external, easy to use ACSI to SCSI adapters that are available, reasonably cheaply, which can give your machine a full SCSI port. Two of the best are the ICD Link 2 and the Translator and both are available for around £70.

If you go for a hard disk then you can either source your own SCSI



device and buy an ACSI to SCSI adapter or you could buy a ready-made setup from an Atari dealer. And don't forget all the other things you can add like CD ROMs, SyQuest removable drives, Zip drives...

Maurice Collins

Falcon flap



Q Last year I bought a Falcon and I am very happy

with my purchase on the whole. However there are a couple of faults that really annoy me. Firstly, sometimes when I boot up it sounds like a key is being held down on my keyboard. I've checked for a 'sticky' key but I can't find one. I took it back to the store where I purchased it but they couldn't find anything wrong with it.

Secondly, when I boot up, my Falcon won't talk to my modem but if I warm boot then it works and carries on working until the next time I switch the machine off and turn it on again. The machine is just out of warranty now - I suppose I should have exchanged it, but I couldn't bear to be without it.

Timothy Bipole, Aylesbury

A These are what developers jokingly call "features" of the Falcon, Tim, and they're

nothing to be too concerned about (just annoyed? - Ed). Everyone I know with a Falcon gets the keyclick problem (just bash a key and carry on with the boot) and the comms problem seems to depend on different Falcons; some have it, some don't. You can get rid of the latter problem entirely by booting with HSMODEM - currently up to version 6 - which will also speed up the data transfer rate between your Falcon and your modem. You should find it on most Atari bulletin boards and PD libraries.

Maurice Collins

File systems



Q I recently came across a reference to

loadable file systems, and was told that they are possible on my Atari ST. Now I do not consider myself to be a beginner when it comes to ST matters, but this is the first time I have heard of loadable file systems. I have a 4Mb STe with 330Mb hard disk. Please explain to me what loadable file systems are, what are they good for and how I can set one up.

Paul Dion, Coventry

A The TOS file system has its roots in DOS and is adequate for most tasks you are likely to carry out, Paul. It takes care of the

things such as the way that files are structured on disk and file attributes. However it lacks in some areas and loadable file systems fill the gap. You can add these by loading from disk, giving you enhanced features over TOS.

Loadable file systems are characterised by the extension XFS. The main ones available are CD file system (CDFS), Minix file system (MinixFS), and RAM file system (RAMFS). CDFS implements the ISO9660 file system standard, which is what CDs use, and RAMFS is a dynamically-resizable RAM disk.

MinixFS is the most commonly used one. Using MinixFS, you are no longer limited to short filenames of the 8+3 format, but filenames of up to 64 characters - and in mixed case! MinixFS is more UNIX like, supporting symbolic and hard links, ie. a file can be in different places on the disk, taking up the space of one. In addition files are given ownership attributes under a multi-user system. Hard disks can have huge partitions without increasing the sector size. In general, MinixFS is faster and more robust than the TOS file system (TOSFS). What's more, is that these three file systems are free, being available from any PD library.

However, you will require MiNT or MultiTOS to use these. MinixFS is incompatible with TOSFS thus needing a separate disk partition. Defragmentation programs for TOS disks do not work with Minix disks, and non-MiNT aware programs are not able to access the long filenames. But

The replacement file selector Freedom is compatible with MinixFS. When installed under MultiTOS it shows that long filenames in mixed case are possible with MinixFS.

I do feel that the situation is improving, with more programs becoming MinixFS aware.

Installing the file systems is easy. Here is a step by step guide to installing a MinixFS on your hard disk. I cannot emphasise how important it is that you backup your hard drive before installing this. You may want to practice installing it on a floppy disk...

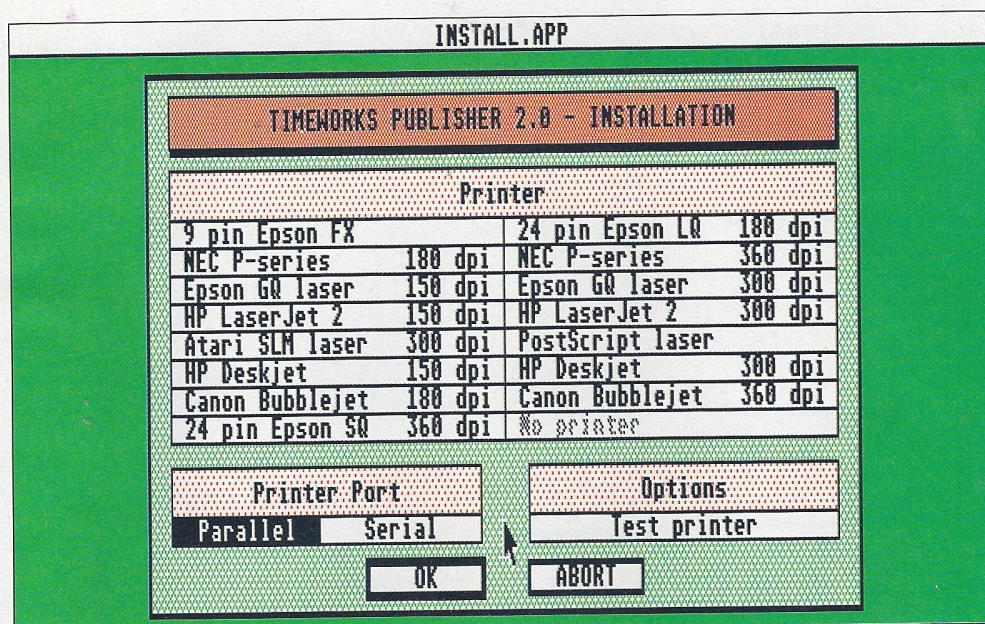
From the MinixFS distribution, click on MINIT.TTP, and enter the following parameters:

-V -n 2 -P F:

This creates a file system on drive F, where you can have a disk as big as you want (as long as the driver supports it), with the ability to have 30 character filenames, and disk protection so that you don't damage the disk when mistakenly copying files from a TOS partition to a Minix partition. There are other parameters, which are covered extensively in the documentation. However, setting up with these parameters is adequate for most.

Once done, place MINIXFS.XFS into either C:MINT, where C is the boot partition, or C:MULTITOS if you have MultiTOS installed. Now reboot with MINT/MultiTOS, and you should be able to use the MinixFS partition.

Denesh Bhabuta



Bubble help



Q I have an ST with 1Mb RAM, two floppy drives

and a BJ10sx printer. When I first installed Timeworks I chose the Bubblejet 360dpi driver, but noticed that certain fonts such as Sage were not there. But when I chose the Bubblejet 180dpi driver they were. Please help. And thanks for a superb magazine.

A R Steele, Congleton

A The main reason Timeworks needs 7 disks is that fonts take up a lot of disk space, and Timeworks is supplied with fonts for many different screen and printer combinations. When you install Timeworks on a floppy disk system there are limitations as to how many fonts you can install due to available disk space.

The installation program works out how many fonts you have room for an installs those. By changing the resolution of the printer, the size of each font file will change. In your case doubling the resolution from 180dpi to 360dpi means that the font files are four times larger (there are twice as many dots in both the horizontal and vertical). Hence you get less available fonts at higher resolutions.

Maurice Collins

Speedo confused



Q Please could you clarify a couple of points? I

note that in the latest issue of *Atari World* you are offering SpeedoGDOS v5, which was not on offer in issue 4, why not? Am I correct in thinking that SpeedoGDOS v5 can use True Type fonts? Is it possible to change the existing font names ie BX000630.SPD and CE0630.TDF to the actual name of the font?

R E Golding, Ashford

A When issue 4 came out we could only get Timeworks running with Speedo 4. Since then we have got it working with SpeedoGDOS 5 and NVDI.3. You can upgrade if you want by calling our normal order line.

Yes SpeedoGDOS 5 can use True Type and Postscript fonts as well as Speedo fonts. Yes it is technically possible to change the name of your fonts but I would not recommend it. It involves making a number of changes to the *.TDF file and will only bring you incompatibility and problems. Try organising your fonts into folders with the appropriate font names.

Maurice Collins

Games offside



Q I recently purchase d a 4Mb Mega STe, TOS 2.06 and a

252Mb hard disk and unfortunately had to discard 50% of my games software as they would not run.

I have tried obvious things eg disconnecting all peripherals, changing from 16 to 8MHz and even loading an older version of TOS (1.4) which did not work at all. My greatest sadness is Kick Off 1 and 2 and Player Manager do not work. Can you help?

J M Freeman, Sheffield

A Well you have certainly tried all the obvious things. There are a number of software products available that might help you. I've seen a Falcon running TOS 1.4 and TOS 2.0 although I'm not sure how "legal" this is or if it can also be run on a Mega STe. There is a piece of shareware software called Backward that certainly works well for the Falcon but does not work for the Mega STe. DC Bootit allows you to Autoboot at 8MHz and STOS Fix 3 lets you run software that uses STOS under TOS 2.06. Try contacting one of the better PD libraries for help on this one.

Richard Barton

Calamity



Q Your help would be most

invaluable. We have just moved up to using Calamus SL with a Falcon (4Mb) but are experiencing print-out problems. We are using an Epson Stylus Bubble jet and can only print at 180dpi. Any attempts to print at other resolutions

result in the computer 'seizing up' - end of session. We have tried using Calamus' own virtual memory routine and Outside VM but with the same results.

Could I persuade you to resolve this problem for us in either of two ways:-

1. Suggest a solution to the above problem.
2. Suggest an alternative that will work well.

We have Atari throughout the school as well as PCs and we want to keep using Atari.

N Fernside, Maltby Comprehensive School

A Again you have tried the obvious things. There is no driver for SL that works above 180dpi. DMC, the developers have been promising one for months - wait and you might be lucky but don't hold your breath!

As for an alternative, with a colour HP Deskjet you should be able to print at least 300 dpi in colour, with a Cannon Bubblejet you should get 360dpi.

However working at these higher resolutions can give memory problems - 4Mb of RAM is not a lot for colour DTP. Virtual memory may help, but you should think about putting a 14Mb memory upgrade in you budget for next year as well!

One temporary fix would be to dump the output from Calamus as a TIFF file to disk and then print it using Imagecopy 4. This excellent image handling utility will print at 720 dpi on an Epson Stylus with amazing - almost photographic quality - results. The only difficulty of course will be loading the image in memory but Imagecopy does work with Outside so it could be worth a try.

Maurice Collins

Fancy earning a tenner?

All you have to do is send us a useful tip for your favourite program - what could be easier!

Send us your hint on a disk, saved as a text file (preferably), along with a screenshot for illustration, or possibly a drawing if it's a "you can build this" style tip. We'll pay £10 for every reader hint that we publish.

In Spain



Q I have been a Spanish Atari Mega ST2 user since

1990, and I'm proud to say I'm very satisfied with this computer. I am an electronics engineer and work on Macs, PCs and UNIX computers but I still think this is an excellent home computer. I also have a PC compatible computer at home, but I seldom use it. I need to upgrade it to a 486DX running at 66Mhz at least, 8MB of RAM and a high performance SVGA card before you could encourage me to switch from my Atari - and I can't afford it right now.

I have been given an old 20MB SCSI drive from a Mac owner friend of mine. It is a Rodime mechanism in its own case. Could I use this drive with an ACSI/SCSI adapter. If so which one would you recommend.

I would be buying mail order from the UK as there is no support for Atari in Spain. Please advise me as I don't want to take an unnecessary risk.

Javier Zubietta, Bilbao, Spain

A You are right, most SCSI hard drives will work with an Atari ST but not all. Furthermore, the hard drive has various options to configure it. This means that whilst the drive is currently working on a Mac, this is no guarantee that it will work on an ST with a host adapter without changing the configuration.

The Rodime you mention will work on an ST if it is configured correctly. However it is very slow, very noisy and takes a huge amount of power. The likelihood is that it will work as it is with any of the available host adapters. However there is no way to guarantee this.

If you explain your problem to one of the more reputable UK suppliers I'm sure they will supply you on a 'work or return' basis - most of the suppliers of Atari kit in the UK are nice guys really!

However there is a much better solution. Hard drive mechanisms have dropped in price. Keep your hard drive case and discard the Rodime unit itself (it's worth much less than the case!). Buy a new drive mechanism and host adapter from the same supplier and ask that it be tested and formatted before being sent to you. Then you know it will work.

Sick of SyQuest



Q I have a 105Mb SyQuest drive and was quite upset

when two months after I bought it, the new cheaper drives were announced! Since the old and new drives are both 3.5" can I use the new 135Mb cartridges instead of the old 105Mb ones? With a price of £15 as opposed to £60 it would obviously be helpful if they were interchangeable.

Chris Simon, Clwyd

SyQuest 105s work well on the Atari but look expensive now.

A Oops! That was definitely the wrong thing to buy. Atari World's editor made the same mistake - only he made it a while ago!

Anyway the 105Mb is a hybrid. It will not even read the older more standard cartridges let alone the newer 135Mb. The new 135Mb makes it look over-priced and under specified. Find a mug to buy it secondhand if you can, else keep your eye out for special offers on the 'old' 105Mb cartridges. There may be some bargains if your lucky, but the prices are bound to go up later as they will probably become collectors items! Oh and don't those 135Mb drives look nice? Bye bye Zip too I think.

Maurice Collins

Old games



Q I have an Atari 180XL and a large number of

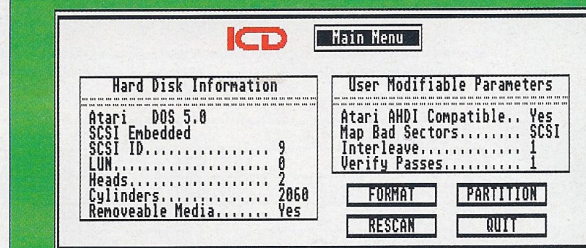
games quite a few of which are old favourites. Is there any way that I could transfer these to STFM disk? I still have the XL but these games take quite a long time to load.

A Davis, Hertford

A No.

Andrew Wright

ICD Hard Disk Formatter Version 6.14 Copyright © 1993



Mega man



Q I recently acquired an Atari Megafile 30

hard disk: it meets my needs and works well except for one thing - the noise! The combined sounds of whirring disk and swooshing fan render the established installation of Hi-fi in my study virtually redundant; is there any remedy for this, other than a long connecting lead so I can put it in the garage...?

E J Sheldermine, Shrewsbury

A I understand the problem well! No the solution is not a long lead either - that will not work. Back in the days when people purchased Mega file hard disks they also had daisy wheel printers. These were unbelievably slow by today's standards, often very expensive and very noisy. To combat the noise acoustic enclosures were developed to put the printer in. I would try and pick up one of these at the local car boot sale. Otherwise a DIY job with a quiet fan some ply and acoustic foam should do the trick.

Maurice Collins

(Note from the editor - I've disconnected the fan on my Megafile 60 and not had any problems. Obviously I can't advise you to do the same though...)

Send us your questions

Can't find anyone to answer that nagging question? Then drop us a line. Our team of experts are on hand to investigate and solve almost anything you can throw at them. Just send your letters to:

Atari World Q&A, Specialist Magazines Ltd, Unit 3 Green Farm, Abbots Ripton, Huntingdon, Cambridge PE17 2PF or e-mail them to:

atari_world@cix.compulink.co.uk

While every effort will be made to answer your question within the pages of Atari World, please note that individual correspondence cannot be entered into.



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THE ATARI World

The Atari World Christmas Shows are happening on the 9th and 10th December in Birmingham and London.

Who will be there?

16/32

Atari World

Best
Electronics

Compo
Software

Goodmans
PD

HiSoft

Titan
Designs

System
Solutions

Merlin

TUS
Developments

Calamus
User

Top Byte

Plus other exhibitors to be confirmed.

CHRISTMAS SHOWS



Where and when?

Saturday 9th December

National Motorcycle Museum, Birmingham

Sunday 10th December

Marlborough Hotel, Bloomsbury Street

London WC1B 3QD

10am to 5pm both days

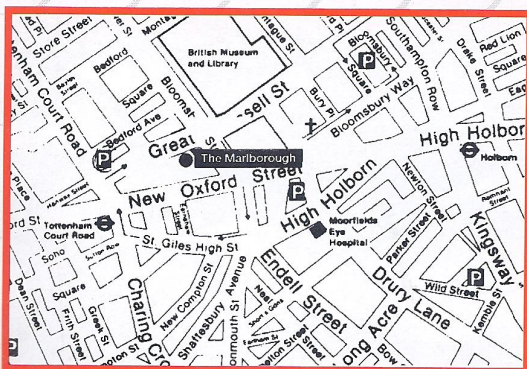
How much does it cost?

£5 before 14:00, then £3, under 16's free when accompanied by an adult.

Can I park?

Yes. There is ample free parking at the Motorcycle museum and the parking meters are free around the Marlborough on a Sunday.

How do I get there?



The Marlborough is 3 minutes walk from Tottenham Court Road tube station.

I live a long way from London and Birmingham – Are there any special arrangements for me?

Sure are. We have some regional representatives who will try and put you in contact with other people making a long journey. Phone up and maybe you will end up with a car share or even a minibus of like minded Atari freaks!

The West	Phineas Pope	Tel 01452 770133
Scotland	Brian Stanton	Tel 01292 313497
North West	Denesh Bhabuta	Tel 0161 796 5864
North East	George Nash	Tel 01207 500414

What else is happening at the show?

At each show there will be 3 seminars hosted by Atari World editor Mr Andrew Wright.

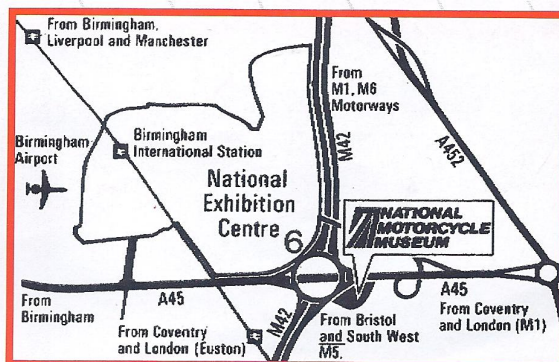
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11.00 What your Atari can do for you
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13.00 Hardware that will change your life
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Regular bus services run from Birmingham International Station to the National Motorcycle Museum.

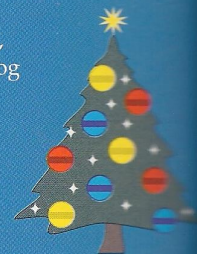


Merry Christmas from HiSoft



Silsoe Village Scene by Gordon Chambers, typeset by Leaside Graphics, Luton.

It's that time of year again, frosty mornings, roaring log fires, red noses ... and all those presents to buy.



We know how difficult Christmas buying decisions can be so, to make life just a little easier, we've come up with some splendid gifts for the Atari lover in your household, at bargain prices.

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All drives need a SCSI interface such as the ICD Link 2, unless you already have a suitable SCSI interface. You can chain up to 7 devices on one SCSI interface.

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